REVELATION OF CHILDBIRTH

TO THE MEMORY OF

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THIS BOOK IS DEDICATED

FOR HIS KINDLY INTEREST IN MY WORK AND FOR HIS PERSONAL FRIENDLINESS AND APPRECIATION I SHALL ALWAYS BE SINCERELY GRATEFUL.

REVELATION OF *CHILDBIRTH*

THE PRINCIPLES AND PRACTICE OF NATURAL CHILDBIRTH

BY

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PREFACE

SINCE the publication of "Natural Childbirth" in 1933, the significance of the emotional factors in the reproductive functions of women has continued to attract attention. Prior to that date, there were practically no monographs on the subject, and very meagre, if any, reference was made to it in standard works of obstetrics.

General practitioners and midwives, particularly the latter, were not slow to appreciate the importance of this new light on midwifery.

With a few exceptions, however, the teachers of obstetrics in the universities refrained from giving any real attention to the state of mind of the woman in childbirth. In 1936, Dr. Francis J. Browne, Professor of Obstetrics at the University of London, published the first edition of "Antenatal and Postnatal Care," in which he invited me to contribute a chapter on the "Influence of the Emotions upon Pregnancy and Parturition," and in his third edition, published two years later, again asked me to amplify those observations because of the interest that the subject had awakened in the profession.

There is no doubt that his belief in the importance of this subject has been instrumental in bringing the attention of the academic schools of obstetrics to the possibilities which it presents. It is with the utmost sincerity then that I express my gratitude for the friendship and confidence that he has given me, particularly the privilege of lecturing from time to time to his students at University College Hospital.

In America, Professor Joseph De Lee, late Emeritus Professor of Obstetrics at the University of Chicago, although not accepting the immediate possibilities of the whole teaching, showed a most kindly appreciation by drawing attention to the value of its application under certain circumstances.

To-day, writings upon the antenatal care of women and upon the conduct of labour very rarely omit some reference to the importance of the care of the emotional states of the woman. Perhaps it is no exaggeration to record that the mind, as a part of the mechanism of reproduction, is no longer overlooked by progressive obstetricians.

There is still, however, considerable misunderstanding in the method of application of this teaching. In a series of over fifty lectures that I have been invited to give upon the influence of the

emotions upon labour, one fact is outstanding : Those who have seriously applied themselves to the care of the mind have been enthusiastic about their results, and both midwives and practitioners demand more knowledge in order to enable them to achieve the perfect painless labour.

It is, therefore, to those who have believed that I write again, not in academic dogma, but rather as one who records clinical observations.

It may be necessary here to justify certain lines of action in order to escape the criticism of wholesale experiment upon my patients. Actually there has been no wild experimenting. My work has been based upon the foundations of early scientific training I was happy enough to acquire. The elementary laws of biology were ingrained in me by Professors Shipley and Stanley Gardiner and by the writings of Professor J. S. Haldane. At the time when Langley and Anderson were demonstrating to the world their discoveries of the functions of the autonomic nervous system, they were my teachers. Whilst Sir Henry Head was still working upon cases of herpes zoster in order to perfect his theory of the zones of cutaneous hyperalgesia, I was his House Physician. James Sherren, who cut the cutaneous nerves of Head's arm himself, so that they two between them could work out " the consequences of injury to the peripheral nerves in man," was my chief when I was House Surgeon at the London Hospital.

Perhaps it is no exaggeration to say that the privilege of such association with great pioneers and teachers produces in the least receptive minds a desire for observation and an unwillingness to accept the truth as being necessarily the whole truth.

When, at length, I became Resident Accoucheur, and saw midwifery in the mass amongst the mothers of Whitechapel, Poplar and Bethnal Green, I was convinced that something beyond the truths that we were taught held the secret of simpler and safer motherhood. I proceeded to write a long and detailed work on the modern conduct of labour, but discarded it because there was neither explanation of nor cure for so many occurrences that were contrary to the laws of nature.

Many years later, prompted by increasing experience, childbirth was examined as a natural function in the light of the foundations of my early training. I argued that if academic obstetric teaching could not explain these things, possibly light could be shed upon them by biology, physiology and neurology? The simple laws of maintenance and reproduction of the species, the profound influence of the sympathetic nervous system upon the activities of the viscera, the causes and interpretation of painful stimuli, the

visceral reactions to emotional states, were the very subjects which my earliest teachers had presented to the scientific world in what has now become epoch-making literature. Gradually, their lessons dovetailed into my own study of normal labour ; the truth of their views was put to the test ; and although much remains to be done, there is sufficient evidence to suggest that many of the problems of midwifery will be solved.

It is my purpose, therefore, to present as simply as possible a theory of natural childbirth, and its application both during pregnancy and parturition, based on my observations. For the style of my writing and for the manner of setting out my argument I ask indulgence, for surely the clinical observations of one whose professional career has in the main been that of a general practitioner are unlikely to be recorded with the perfection we expect from those whose calling has been professorial. This task has not been undertaken, therefore, for academic reasons, but rather as a further step towards proof of the philosophical principle that all progress, both moral and physical, ultimately depends upon the perfection of motherhood.

G.D.R.

June, 1942

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INTRODUCTION

REPRODUCTION of the species is one of the primary factors in Nature; it is essential to the survival of all higher forms of life. The mention of the word "motherhood" creates an atmosphere of reverence. Men, consciously and subconsciously, react with all the male instincts of preservation and protection when in its presence. A woman with child, or with her child, is beyond the law of conflict. Injury to mothers and their young is the basest form of cruelty. Tenderness is an emotion primarily designed by Nature to protect the defenceless; it is an emotion only experienced by many men when in the presence of women.

Woman herself, however, is involved in a more complicated series of reactions. She knows that physically, physiologically and psychologically she is adapted primarily for the perfection of womanhood, which is, according to the law of Nature, reproduction. All that is most beautiful in her life is associated with the emotions leading up to this ultimate function. Are there any comparable joys in the life of the average woman to the ever-increasing intensity of pleasurable feelings that are experienced during the successive phases of mating! We speak of it as being "in love"; "betrothal"; marriage; early married life; and finally, motherhood. The average woman associates all that is beautiful in her life with this series of events.

But, unfortunately, in the final perfection of these joys a large majority remember only the pain and anguish and even terror that they were called upon to endure at the birth of their first child. That is indeed a paradox. We have to ask ourselves the questions: does Nature inveigle woman along the course of its essential purpose by bringing her first into contact with the irresistible demands of all that is beautiful? Is she led on and on from one joy to another by some force which intends to make her pay eventually the price of pain before she can achieve her objective? If this is in keeping with the law of Nature, what can be its purpose? For generations, childbirth has been accepted as a dangerous and painful experience. Is woman expected to arrive at her perfection by the exhibition of beauty on the one hand and suffering on the other?

It is not suggested for one moment that by waving a magic wand over the heads of the community all children will suddenly be born according to the perfect law; but I hope that these pages will contain sufficient evidence to show that this is no dream, and that

to-day there are methods of escorting women through pregnancy and parturition which will give these results.

No man alive can expect the average woman to believe that such a thing is possible. I have, therefore, quoted with their full permission the women themselves who have experienced childbirth without pain. They have described, in their own words, what happened at that time ; they have known the joy of motherhood ; and they are living with the reward of healthy children whose mental and physical development is in many cases unmistakably above the average of their generation.

From time to time, pestilence and war sweep through nations, robbing them of much that is best in their stock. If we are to survive as a people, and as an Empire, we must constantly be alert to improve our stock. The structure of society can only be erected upon the foundations of biological facts. The Law of Survival must remain the cornerstone of the Temple of Culture, however immense its scale or elaborate its external decoration. That law embodies only two principles : reproduction and maintenance.

The intricacies of maintenance of the species and in particular the freedom loving peoples of the human race are revolutionising the thought and action of the world. Motherhood demands to be raised to its rightful position of pre-eminence in the affairs of State. The organisation, in the hands of Government, for the repopulation of the Commonwealth of Nations should be conducted by a special ministry, staffed by competent administrators who have detailed knowledge of obstetrics from every angle, academic, social and economic. " Power and Plenty," is the criterion of successful maintenance—but what an ostentatious misconception of the Natural Law when compared with the pride and joy of perfected motherhood—which is the criterion of successful reproduction. We look forward to the day when parliamentary representation may depend upon a candidate's fitness to put forward the demands of his constituents for healthy and carefree reproduction as well as to express their opinions upon taxes, wages and education, which after all are concerned only with maintenance.

This book is presented as an elementary step in the crusade to destroy some of the crudely mediæval practices and beliefs that tarnish the glorious calling of motherhood. Had the quiet strength and indomitable purpose of the natural forces of reproduction been heard in the councils of statesmen the world over, the necessity for war amongst nations would have been stifled by stern emotional reactions which direct the human mind to fundamental truth and greater understanding of the omnipotent but unseen forces of the universe.

REVELATION OF CHILDBIRTH

CHAPTER I

THE SCIENCE OF OBSTETRICS

BEFORE we embark upon this rather hazardous voyage—the description of something new in obstetrics—it may be well to outline briefly certain facts relating to childbirth during the later stages of civilisation.

There is a tendency in these days, when publication in the Press familiarise the man in the street with the most dramatic exploits in the laboratory, to accept each new discovery as the last word. So wonderful do the revelations of science appear that the idea of introducing simplicity as a means of unearthing the even greater revelations of nature is not well received. But let us consider the position to-day compared with a hundred years ago and with a thousand years ago. It will then become obvious that there is no reason to suppose that we have done any more in our time than add to our knowledge of childbirth. There is certainly no cause to consider that knowledge perfect.

Humanity has existed for a vast number of years. There is reason to believe that the Neanderthal race lasted for more than two hundred thousand years. There is further evidence that men have lived and died in Europe for over a hundred thousand years. The evolutionary change from man-like apes to man himself is difficult to assign to any given period ; but the essential fact remains that reproduction of these species has not altered so far as the fundamental anatomical and physiological machinery is concerned. We still read that the pain of childbearing has always been the heritage of woman because nothing in our modern teaching has enabled us to prevent it. It is believed, because it exists. Science of to-day can relieve women of their suffering, but it cannot prevent the causes of pain in childbirth. It is not without interest that the more civilised a people becomes, the more intensified this pain appears to be ; and since merciful relief of suffering is considered one of the greatest duties that physicians can perform, it has become easier to utilise the pain-relieving discoveries of science than to investigate its complicated causes. There can be no more horrible stigma upon civilisation than the history of childbirth. This is not a reference only to the unavoidable pains which accompany pathological states in reproduction, but to the most normal

and natural parturition. The higher the civilisation of a country the more generally is pain a symptom of childbirth.

Efforts, of course, have been made to relieve this pain for many centuries. Old writings suggest that herbs and potions were used to relieve women in labour. Witchcraft was resorted to. Three thousand years before Christ, the priests among the Egyptians were called in to women in labour. In fact it may be said with some accuracy that amongst the most primitive people of which any record exists, help, according to the customs of the time, was given to women in labour. It does not appear, however, that anything effectively prevented or relieved the pains of labour. In the Book of Genesis, 3rd Chapter, 16th verse, "The Lord God said to Eve—'I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children.'" This statement in the Holy Book to the effect that woman because of her sin was condemned to a multitude of sorrows and pains, particularly in the conception, bearing and bringing up of her children, has had a very considerable influence among Christian communities.

Even as late as the middle of the nineteenth century this was quoted by clerical and medical authorities as justification for opposition to any active relief of the sufferings of women in labour. Five hundred years before Christ, the great Hippocrates endeavoured to organise and instruct midwives. Their attentions bore little resemblance to those which are expected of midwives to-day, but according to their ideas of assistance, so they practised.

In the second century after Christ, Soranus of Ephesus practised midwifery; it is recorded that he not only denied the power of spirits and superstitions, but that he actually considered the feelings of the woman herself (Howard Haggard, "Devils, Drugs and Doctors," Heinemann, 1929).

In the Middle Ages, however, women appear to have been deserted once more. In many countries it was a crime for men to attend women in labour until the sixteenth century. Less than three hundred years ago, physicians commenced the practice of midwifery. It was not until the nineteenth century that the foundations of our present knowledge were laid. We must, therefore, realise how young and how immature is the science of obstetrics. Until the middle of the nineteenth century there was no anæsthesia; it had not been discovered. Until 1866 there was no knowledge of asepsis. We sometimes fail to realise that there are men and women living to-day who were born before the advent of these things. It is difficult for people to visualise the state of affairs when limbs were amputated, abdomens opened, and Cæsarian sections performed without any anæsthesia but with almost constant sepsis which gave

rise to a high percentage of mortality in the simplest of operations.

In 1847, Simpson first used anæsthesia. On April 7th, 1853, John Snow anæsthetised Queen Victoria when Prince Leopold was born. For the use of anæsthetics for this purpose, Simpson was harshly criticised by the Church. To prevent pain during childbirth, he was told, was contrary to religion and the express command of the scriptures. But anæsthesia had come to stay. A year later, in 1854, Florence Nightingale was the first woman to make widely known that cleanliness and fresh air were fundamental necessities of nursing. It was largely because of her work during the Crimean War that the standard both of the training and the practice of nursing was raised. The gin-drinking reprobates who were found in great numbers both in hospitals and among midwives began to disappear. With their exodus, childbed fever less frequently occurred in midwives' cases. In the Maternity Hospital in Vienna, medical students' cases showed an average over a period of six years of ninety-nine deaths per thousand cases from puerperal fever. Semmelweis, who was physician at the hospital at that time (1858), believed the cause to be due to something arising within the hospital, and made his students wash their hands in antiseptic. In one year the death rate fell from one hundred and twenty per thousand to twelve per thousand. This success necessitated his facing opposition and hostility from those around him. But his work was done ; he had laid a great foundation stone of safer childbirth. Although he did not fully understand the significance of the infection, he realised that it was the physicians themselves who caused the deaths of their patients by transmitting it.

Probably all of us pause to think sometimes of how much harm we do in our efforts to do good ; how much trouble we cause when conscientiously endeavouring to prevent it.

In 1866, Lister brought us the full knowledge of antiseptics.

So, gradually, truth has been discovered. The safety of women has been the object of investigation with results that would have been unbelievable when the mothers and grandmothers of many of us were born. But how short a time we have had—less than a hundred years, and man has been reproducing his kind for over two hundred thousand years. Now that many of the troubles and dangers have been overcome we must move on, not only to save more lives, but actually to bring happiness to replace the agony of fear. We must bring a fuller life to women who are called upon to reproduce our species. The joy of new life must be the vision of motherhood, instead of the fear of death that has clouded it since civilisation developed.

It will be easier, therefore, in reading the succeeding chapters, to

realise that they represent an effort to improve, an effort to construct new ways and means, not simply to destroy those which have done good service in the course of progress. Therefore, where there is obvious truth in this teaching, let it be augmented ; and if any obvious fallacy is unmasked, assist in its burial.

CHAPTER II

ANATOMY AND PHYSIOLOGY

I HAVE often wondered if a woman in Whitechapel whose name I have long since forgotten has ever realised the far-reaching influence of a casual remark she made to me. For some reason or other the whole picture made an indelible impression upon my mind, although at the time I had no idea that it was the seed that would eventually alter the course of my life.

I had ploughed through mud and rain on my bicycle between two and three in the morning down Whitechapel Road, turned right and left, and innumerable rights and lefts before I came to a low hovel by the railway arches. Having groped and stumbled my way up a dark staircase, I opened the door of a room about ten feet square. There was a pool of water lying on the floor; the window was broken; rain was pouring in; the bed had no proper covering and was kept up at one end by a sugar box. My patient lay covered only with sacks and an old black skirt. The room was lit by one candle stuck in the top of a beer bottle on the mantelshelf. A neighbour had brought in a jug of water and a basin; I had to provide my own soap and towel. In spite of this setting—which even thirty years ago was a disgrace to any civilised country—I soon became conscious of a quiet kindliness in the atmosphere.

In due course, the baby was born. There was no fuss or noise. Everything seemed to have been carried out according to an ordered plan. There was only one slight dissension: I tried to persuade my patient to let me put the mask over her face and give her some chloroform when the head appeared and the dilatation of the passages was obvious. She, however, resented the suggestion, and firmly but kindly refused to take this help. It was the first time in my short experience that I had ever been refused when offering chloroform. As I was about to leave some time later I asked her why it was that she would not use the mask. She did not answer at once, but looked from the old woman who had been assisting, to the window through which was bursting the first light of dawn; and then shyly she turned to me and said: "It didn't hurt. It wasn't meant to, was it, doctor?"

For weeks and months afterwards, as I sat with women in labour, women who appeared to be in the terror and agony of childbirth, that sentence came drumming back into my ears: "It wasn't meant to, was it, doctor?" until finally, even through my orthodox

and conservative mind, I began to see light. I began to realise that there was no law in nature and no design that could justify the pain of childbirth. Not many years afterwards the war took me to foreign lands. There I witnessed women having their babies in the most natural and apparently painless manner, but I also saw those who suffered pain and to whom the birth of their child was an experience horrible to remember. When eventually the war ceased and I was back at the London Hospital as resident accoucheur, the same problem occurred again. Most women seemed to suffer so much, but here and there I met the calm woman who neither wished for anæsthetic nor appeared to have any unbearable discomfort.

It was very difficult to explain why one should suffer and another be apparently free from pain. There did not seem to be much difference in the actual labours ; they both had to work equally hard ; the time factor was not markedly different one from the other. Perhaps those who suffered had slightly longer labours on an average than those who had less discomfort. In those days we did not know the mechanism of pain as we do to-day, and a good deal was overlooked which certainly would not have passed unnoticed in the light of our present teaching. It gradually dawned on me, however, that it was the peacefulness of a relatively painless labour that marked it out most clearly as being different from the others. There was calm, it seemed almost faith, in the normal and natural outcome of childbirth.

So gradually my mind was influenced by these observations to investigate the part played by the emotions in the natural function of reproduction. Was the nature of labour responsible for the emotional state of the woman, or was the emotional state of the woman to a large extent responsible for the nature of the labour ? Which was primary and which was secondary ? Happily my own environment and the associations of my home had given me the privilege of knowing motherhood at its best. I had seen that unshakable faith in the power of love which met the tribulations and tragedies of life with a calm and courageous strength. As a young man motherhood was, to me, a holy estate, the mysteries of which were only shared by those who had endured. Perhaps nature designed that tenderness in man in order that he might protect the defenceless bearer of the young. The great painters of the past have searched for the reality of beauty, and have chosen to represent it in motherhood. Joshua Reynolds' pictures show the dignified pride of their accomplishment. Romney in his " Lady with a Child " has emphasised the peaceful delights of a mother as her small infant rests contented and fearless upon her

lap. Memlin and others of the Dutch school represented the satisfying possessiveness of motherhood, whereas Leonardo da Vinci laid stress upon its joys and happiness. But they all have one feature in common which is unmistakable: they depict an atmosphere of absolute peace. Perhaps in modern life this may represent a relatively unobtainable ideal, but even to-day, is there any happiness that can be compared with that of a woman with her small babies? Is there any love so unselfish and so inspiring as the love of a mother for her child? To healthy-minded women it is the realisation of their highest ambition, the fulfilment of their instinctive urge, and the ultimate perfection of their bodily functions.

But we cannot think of motherhood only in terms of its satisfactory completion. We must look back into the life of a young woman and consider the thoughts and experiences which eventually lead her to become a mother. We need not delve into that experimental playground of psychologists which is popularly known as "sex life." We have only to recall the normal sequence of events that every healthy-minded girl and young woman of our time goes through. At an early age she learns all the happiness of love; it is an emotional development which radiates from a young girl. You will often find that in their untrained and undifferentiated affection life holds some joys too deep and too unfathomable for them to understand. This irresistible but nebulous urge to love is so mysterious that one girl of fifteen wrote to me from school—"I wish you could explain to me why I feel as I do this term; it has never been like it before. I am so deliriously happy. There is no reason that I know of, but I am fond of everybody. I seem to see the good in them, and want to *think* lovely things, as if I were possessed of a heavenly spirit making me so much better than my real self."

And so with every girl in varying degrees this power which will rule their lives begins to develop at an early age, until in due course they find themselves in love, and here the hotch-potch of their emotional life becomes concentrated, with all its thrills, its joys and its anxieties, upon one semi-divine individual. It is the spiritual refinement of her own ideal, and in the normal course of events she becomes betrothed, but unwilling to believe that there are others who are equally fortunate, and blissfully ignorant of the fact that she is but an instrument in the design of nature. Eventually she marries, and if all goes well she conceives and prepares to bear her child.

The average woman associates all that is beautiful in her life with this series of events. It is the implementation of the power of

life by the universal forces which govern all things to the end that the human race shall survive. From earliest girlhood, each forward step in this progression is made because of the desire for greater joy or fuller realisation of her dreams. The law of life does not beat a woman on by either fear or physical necessity, but attracts her to develop by the presentation of increasingly beautiful experiences which she is not slow to grasp. Love may be beset by anxieties and doubts, but of itself it stimulates all the noblest and greatest qualities of which human nature is characterised at its best. It is the greatest power in the world, and without it the races of mankind would finish in but a few generations.

We must ask ourselves : Is it not possible that a force so fundamental may not be the motive power of life itself? Must we of necessity paraphrase the simple dictum " God is Love," or may we deduce with Euclidian accuracy the converse that " Love is God." At first sight this may appear to be a philosophical consideration not in any way concerned with the immediate task, but if in a normal and healthy life of girlhood and womanhood before childbirth and after childbirth we find these outstanding qualities of beauty and greatness, what justification, what reason, or what presumption of truth can there be in the acceptance of an agonising ordeal at the very time of fulfilment of life's most essential purpose? What manner of thing is this love that leads its most natural and perfect children through the green pastures of all that is beautiful in life, and urges them on by a series of ever increasing delights until their ultimate goal is in sight, then suddenly and without mercy chastises and terrifies them before hurling them unconscious, injured and resentful in the new world of motherhood. I strongly suggest that there is only one answer—This is not the course of the Power of Love. This is not the purposeful design of creation. Somewhere, for some reason, an interloper has crept in, and must be irradicated. Something stands in the way which, through blindness and ignorance in the development of our civilisation, has been allowed to grow and impede the natural course of events.

Some fifteen years ago I was persuaded of the truth that this aspect of childbirth held. The Whitechapel question still came back to me : " It wasn't meant to, was it, doctor? " Then I knew, after years of apparently fruitless effort, that I had found a dogmatic answer, and that answer was : " No, it was not meant to hurt."

Unfortunately my colleagues had a very straightforward rejoinder to my " noble " assumption, as they called it. " Why, then, does it hurt? " This book is a record of the adventures and discoveries that I have made during the last fifteen years in the uncharted

waters of natural childbirth. Not only does it essay to explain the cause of pain in civilised labour, but also to demonstrate that those evil causes may to some extent be removed. It is obvious that this somewhat revolutionary aspect of childbirth is not intended to be a panacea for all ills. The application of this theory is only possible in normal and uncomplicated labour, and as that comprises probably over 95 per cent. of all labours, unless made abnormal by attendants, its influence may be very considerable.

In outline, the theory of natural childbirth is as follows :

Civilisation and culture have brought influences to bear upon the minds of women which have introduced justifiable fears and anxieties concerning labour. The more cultured the races of the earth have become, so much the more dogmatic have they been in pronouncing childbirth to be a painful and dangerous ordeal. This fear and anticipation have given rise to natural protective tensions in the body, and such tensions are not of the mind only, for the mechanism of protective action by the body includes muscle tension. Unfortunately the natural tension produced by fear influences those muscles which close the womb and prevent the child from being driven out during childbirth. Therefore, fear inhibits ; that is to say, gives rise to resistance at the outlet of the womb, when in the normal state those muscles should be relaxed and free from tension. Such resistance and tension give rise to real pain, because the uterus is supplied with organs which record pain set up by excessive tension. Therefore, fear, pain and tension are the three evils which are not normal to the natural design, but which have been introduced in the course of civilisation by the ignorance of those who have been concerned with attendance at childbirth. If pain, fear and tension go hand in hand, then it must be necessary to relieve tension and to overcome fear in order to eliminate pain. The implementation of my theory is demonstrated in the methods by which fear may be overcome, tension may be eliminated and replaced by physical and mental relaxation. The resultant absence of pain is to be judged by the records of the women themselves, and not by the possibly biased observations of an enthusiastic obstetrician. If this method is true and simple, then it is obviously worth while, because it avoids surgical interference in a large number of midwifery cases, and surgical interference, we have learnt from years of experience, is a danger not only to the child but to the mother in the immediate present and certainly to her health in the future.

But as we read the records of the women, we shall probably be astonished to find that this is not all, for not only is the absence of unbearable pain recorded, but they become conscious of a sense

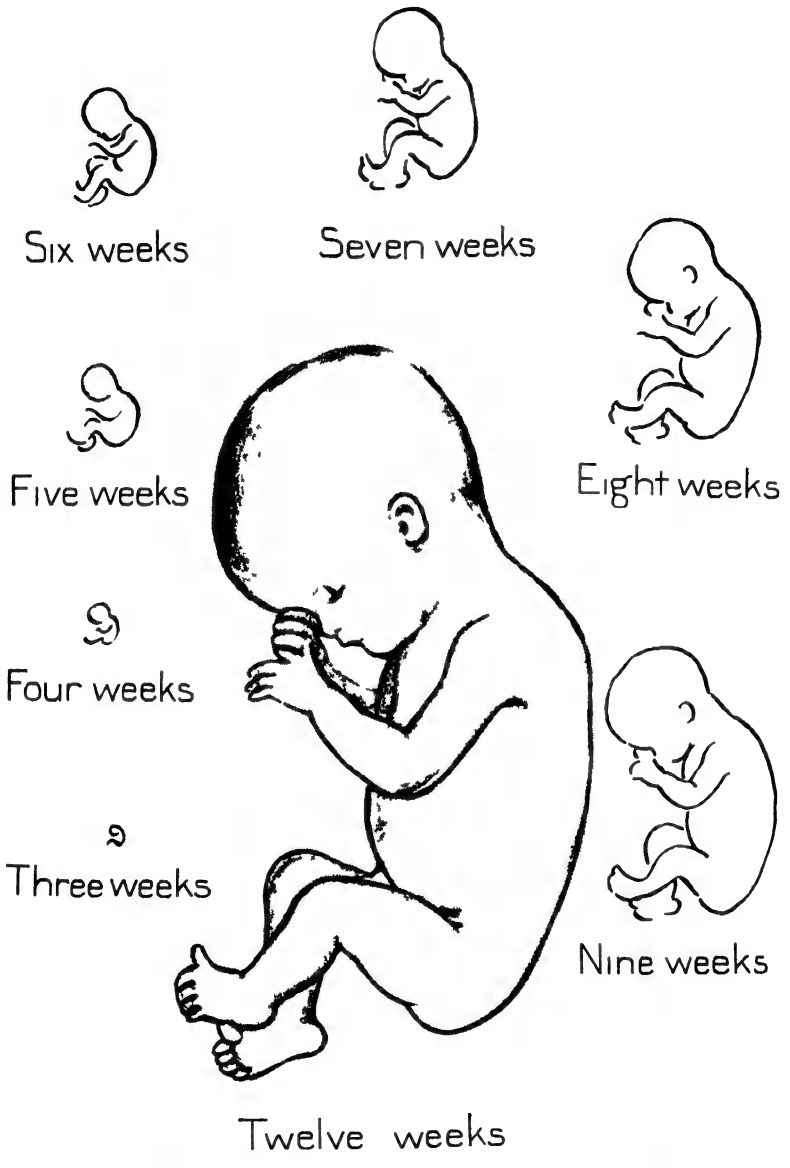
of exaltation and incomparable happiness at the knowledge of the arrival of their child. Many women have described their experiences of childbirth as being associated with a spiritual uplifting, the power of which they have never previously been aware. I have witnessed this so often, and become so profoundly conscious of the inexplicable transfiguration of women at the time of their babies' arrival, that I have been led, as usual, to ask : Why this ? It is not sentimentality ; it is not relief from suffering ; it is not simply the satisfaction of accomplishment. It is bigger than all those things. Can it be that the Creator intended to draw mothers nearest to Himself at the moment of love's fulfilment ? Can it be that it is the natural reward of those who perfect their ultimate purpose in life ?

I was talking this afternoon to a nurse who has attended cases with me until she herself was seven months pregnant. About a fortnight ago, her baby boy was born, and I had an opportunity of asking her in detail what she thought about the whole process. Nurses are not always the best patients because they have a way of reviewing all the abnormalities they have seen, and visualising all the worst cases they have attended whilst they themselves are in labour. We discussed at length everything that had happened during her pregnancy and labour. She had followed closely my teaching which she had seen practised in the maternity home, and she gave as her final judgment that she could not understand why women should make such a fuss about having a baby. At one point only—and then for a very few contractions—was she in discomfort, but other than that the whole thing, as she put it, was an exciting and marvellous experience. She also made a suggestion to me that I should explain certain of the phenomena of the development of a baby within the uterus, because so many women are ignorant of these elementary facts that anxieties and doubts arise in their minds which are difficult to overcome and cause much unnecessary trepidation.

I propose, therefore, to give a short note upon the development of the baby in the uterus ; how the uterus is made ; how it works, and how it is supplied with the necessary fuel through the blood-stream to carry out its work without any difficulty. This will answer many of the questions I am asked by women who have become pregnant.

Development of the Human Egg. The human egg is just visible to the naked eye : 0.2 of a millimetre in diameter. When it is fertilised it becomes embedded in the side of the womb, and there it commences to grow. At the end of the first month, it is 4 millimetres long, and lies in a fluid-filled sack about the size of a pigeon's

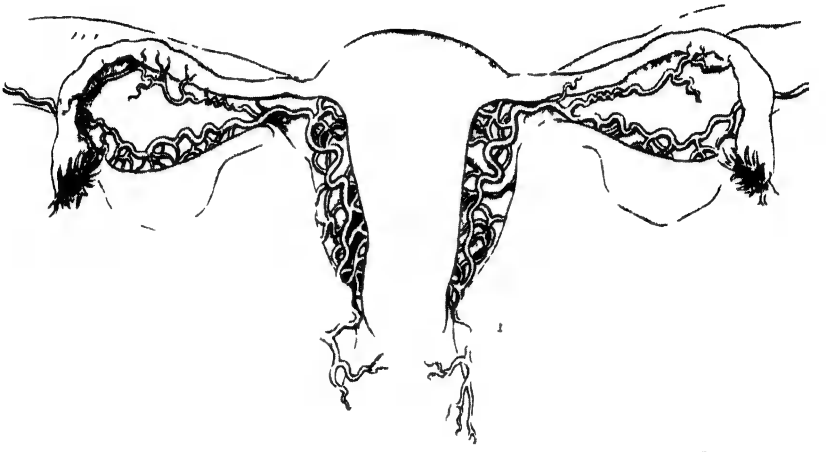
PLATE I



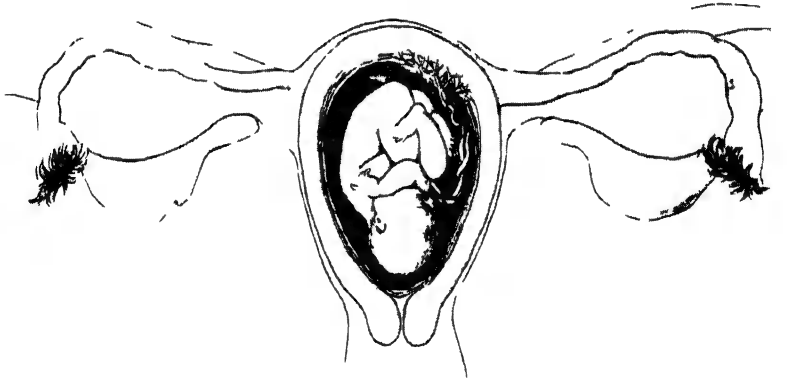
COMPARATIVE SIZES OF DEVELOPING INFANT DURING THE FIRST TWELVE WEEKS.

[*To face p.* 10.

PLATE II



(A) The Ovaries Fallopian Tubes and some of the Enlarged Blood Vessels during the Early Months of Pregnancy.



(B) Placenta, Umbilical Cord and Fœtus lying in the Bag of Waters at about Three Months

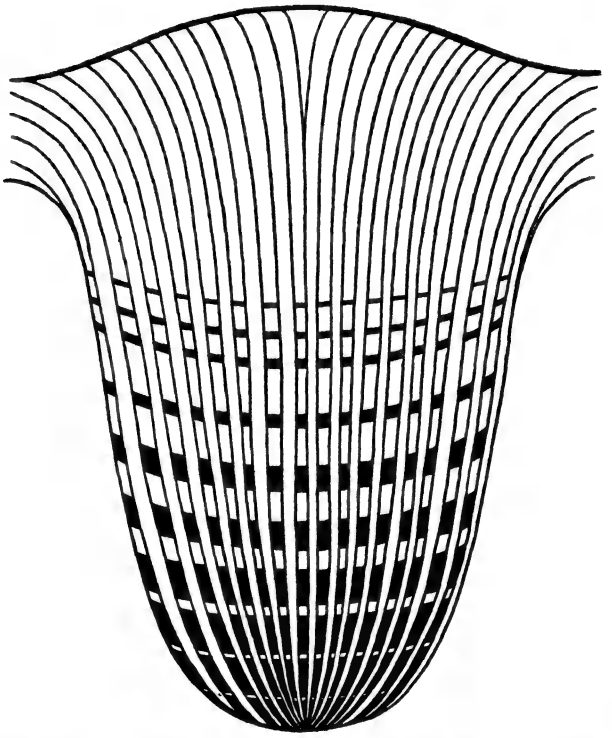
egg. At the end of the second month, it is 3 centimetres in length ; arms, legs and head are clearly distinguishable. It is now fed through its navel by a cord which is attached to the placenta. This structure is firmly fused to the inner wall of the uterus and takes from the mother's blood the things necessary for the nourishment of the baby. At the end of the third month the fœtus is 9 centimetres long, weighs about 5 grams, and the whole egg is about the size of a goose's egg. At the end of the fourth month, the fœtus has grown rapidly to 18 centimetres in length and weighs 120 grams ; its heart can be heard beating strongly, and it is possible to tell the sex of the child should it be born at this age. At the fifth month it is 25 centimetres long and weighs about 260 grams, and at the sixth month it is about 30 centimetres long and weighs 650 grams (or about 1½ lb.). Occasionally one reads in medical literature of babies of this age having been born and surviving. By the end of the seventh month—that is, twenty-eight weeks old—the child is perfected, although not fully grown or fully nourished, but many twenty-eight week children have been born and survived perfectly happily. At the eighth month the child is 43 centimetres long and stands a very good chance of healthy survival. At the ninth month, or thirty-six weeks, the average weight is 5–5½ lb. Its organs and functions are all well developed, and although these children possibly require more care than a full-time child, they should survive perfectly well if born at this age. At the tenth month, that is, forty weeks—which is about the average time that a child takes to develop—it should weight about 7–7½ lb. and be 48–50 centimetres in length, and it is in that condition that natural birth takes place. As the infant grows, so the womb or uterus grows round it, increasing in size.

Progressive Changes in the Size of the Uterus during Pregnancy. After two months, the pregnant uterus is about the size of a large hen's egg. At the third month it can just be felt in a thin woman above the pubic bone (the bone bridging across the lower abdomen). At the fourth month, it is half-way between the pubic bone and the navel. At five and a half months, or twenty-two to twenty-three weeks, it is up to the navel. At seven months, two to three inches above the navel. At eight months, about half-way between the navel and the lower end of the breast bone. At nine and a half months, or thirty-eight weeks, it reaches its highest point in the abdomen. At full term, or forty weeks, it has dropped back one to two inches.

The actual size of the uterus varies according to the amount of water in it and the size of the baby, but the levels in the abdomen at certain weeks of development do not vary very much in different

women. With these facts in mind, we can consider the structure of the uterus when the baby is ready to be born.

At term—that is, when the baby is ready to be born, the uterus is a muscular bag about fourteen inches in length and approximately just under half an inch in thickness. It is well supplied with nerves which stimulate the muscle contraction, and it also has a copious blood supply which is necessary to take fresh blood to the uterus and carry away all the waste products of muscular activity.



Showing diagrammatically the relative distribution of longitudinal and circular muscle fibres in the uterus at full term.

The Muscle Layers of the Uterus. There are three layers in the uterine wall: the outside layer consists of longitudinal fibres which spread up over the front of the uterus, or fundus, and down the back or posterior wall. They are, in the main, distributed so that by contraction they shorten the uterus. The middle layer is composed of fibres which run in all directions, matted closely together; the most important fibres are entwined in "figures of eight" formation and whorls round the large blood vessels. The

inner layer consists of fibres, most of which pass round the body of the uterus. There are very few of these fibres in the upper part, or fundus, of the organ ; they are concentrated in the lower uterine segment—that is, the lower half of the uterus, and near the neck or outlet. The distribution of these various fibres should be carefully noted, as it is important to understand what is likely to occur when each group contracts. In practice, it is difficult to separate one group from another, and in the dissecting room practically impossible to find a clear line of demarcation between the longitudinal fibres, the middle layer and the internal circular fibres. But broadly speaking, the outside, or long, fibres, when contracting, are expulsive—that is to say, tend to empty the uterus ; the middle layer constricts the blood vessels when it contracts, and by relaxing allows a free flow of blood through the veinous channels ; whereas the circular, or inner, layer, by contracting, tends to close the outlet of the uterus, and to hold up, or inhibit, the activity of the uterus during labour.

Nerves of the Uterus. Contraction of these muscles depends, of course, upon nerve supplies, and there are three sources of nervous impulse to the uterus which send stimuli to these muscles. The circular fibres are supplied by what is known as the sympathetic nervous system. These same nerves supply most of the muscle tissue forming whorls or figures of eight round the large blood vessels in the middle layer. The longitudinal fibres have two sources of nerve supply : one from the parasympathetic group, and the other a local innervation from ganglia within the muscle of the uterus itself which is not associated in any way with the spinal cord or the sympathetic nervous system. The importance of this local innervation will be seen when the question is studied in detail, and when the harmony of the interaction of the uterine muscles is discussed.

We may summarise this under four headings :—

(1) The local innervation, which is responsible for expulsive contractions.
(2) The parasympathetic nerve supply, which stimulates the muscles of expulsion.
(3) The sympathetic nerves, which inhibit expulsion.
(4) The sympathetic nerves, which cause the muscle fibres around the large vessel of the middle layer to contract.

A further explanation of the normal interaction of these nerves is required before we can fully understand the difference between natural childbirth and childbirth subjected to outside and unnatural influences.

Harmony of Muscle Contractions. We have all over the body groups

of muscles whose actions are opposed to each other. A simple example is the action of the biceps and the triceps ; if we wish to bend the arm at the elbow, the biceps contracts and the triceps, which normally opposes it, relaxes. If, on the other hand, we wish to straighten our arm, the triceps contracts and the biceps at the same time relaxes. If both these muscles function at the same time, the arm goes into a state of rigidity. If the contractions are strong enough, the whole arm quivers, and in a very short time there is considerable pain in the limb. The same convenient harmony of muscle action may be seen in the bowel and the urinary bladder ; when the bowel is emptied, the muscles which are brought into play in order to expel its contents are not opposed by the ring of muscles, or the sphincter, at the outlet, which normally holds the bowel tightly closed. When an expulsive effort is made, the outlet is relaxed. The same applies to the urinary apparatus ; until it is convenient to micturate, the muscle at the neck of the bladder remains firmly contracted, thereby retaining its contents. When the muscle at the outlet is relaxed, the contractile wall of the bladder forces the urine out through the urethra. Both these mechanisms may give rise to acute pain if spasmodic contraction at the outlet occurs and resists the efforts of the expulsive muscles. The condition called fissure of the anus, which is extremely painful, may cause a spasm of the sphincter muscle so that it will not relax. The two opposing muscles, acting at the same time, combine to produce acute pain from abnormal pressure. When there is inflammation or irritation of the urethra, it is painful to pass urine, and spasm of the urethra may occur ; the muscles of expulsion are unable to force the urine out, and acute pain results from increased tension.

This same harmony of muscle action is seen in the uterus during childbirth. The longitudinal muscle fibres contract and their action is expulsive, and in normal conditions the circular muscle fibres are relaxed and flaccid, allowing dilatation of the outlet to the womb and free passage of the child.

From the general principles of the construction of the uterus we deduce the labour without tension or injury depends upon :

(1) Expulsive muscle activity without resistance from constricting muscles.

(2) Expulsive nerve impulses active and constrictor nerve impulses inactive.

(3) Elasticity of structures around arteries and veins between expulsive contractions so that a full supply of fresh blood may be maintained and the waste products of muscle action freely removed.

CHAPTER III

THE PAIN OF LABOUR

The actual birth of a child is known as Labour or Parturition. When we speak of normal, natural or uncomplicated labour, we infer that the child is the right size and in the correct position to pass through the pelvic canal without undue strain or injury to the surrounding parts. In the majority of labours, everything appears to be perfect ; the muscles contract well, the child is the correct size and in a good position, but, in spite of this, there is pain. Therefore, pain must be discussed before we can diagnose its causes or devise measures to prevent it.

This is perhaps ground upon which angels would fear to tread ; it is a subject which has claimed the attention of scientists and philosophers for centuries. A large part of all medical literature is concerned with the significances of painful sensations in disease and health. In 1915 Richard Behan published a book called " Pain." At the end of this considerable tome he compiled no less than sixty-five pages of the names of scientists and their writings upon this subject. He also gave a long list of those who had attempted to define pain ; they not only included physiologists and anatomists, but Schopenhauer, Spinosa, Cicero and many of the old philosophers. Therefore we must not aspire to anything other than a simple outline of pain, its occurrence and its purpose.

This phenomenon has probably been evolved for a definite purpose. It is so general among all the higher forms of animal life that it is probably for the good of the individual and not for the harm, as is sometimes considered to be likely. It is an important device employed by nature to protect the individual from injury or from the result of injury. In the earlier forms of animal life, the reaction to irritation is movement ; if we irritate the amœba, for example, with a foreign body its response is movement in order to escape from or protect itself against the irritating body. As we ascend in the scale of animal life to the more complex individual, awareness to stimulation increases, and the reaction increases proportionately. Whether such reaction is associated with intention is open to discussion, and we must presume that in the absence of consciousness such reactions are purely tissue reflexes. With the development of the brain, however, there is a conscious recognition of these stimuli, and it is by means of messages sent to the brain that the individual becomes conscious of or able to interpret the

Explanation of Plate III

(S1) Impulses of sensation from uterus pass in to (A) poster cells of cord and travel up (S2) blue tracks to the (thalamus which is the relay station for :

(1) all sensory impressions ;
(2) seat of pain interpretation ;
(3) the main centre for emotional expression, especia fear.

Impressions intensified by fear pass by (S3) fibres distributed (C) cortex.

(C) Cortex (1) receives ultimate sensory stimuli.

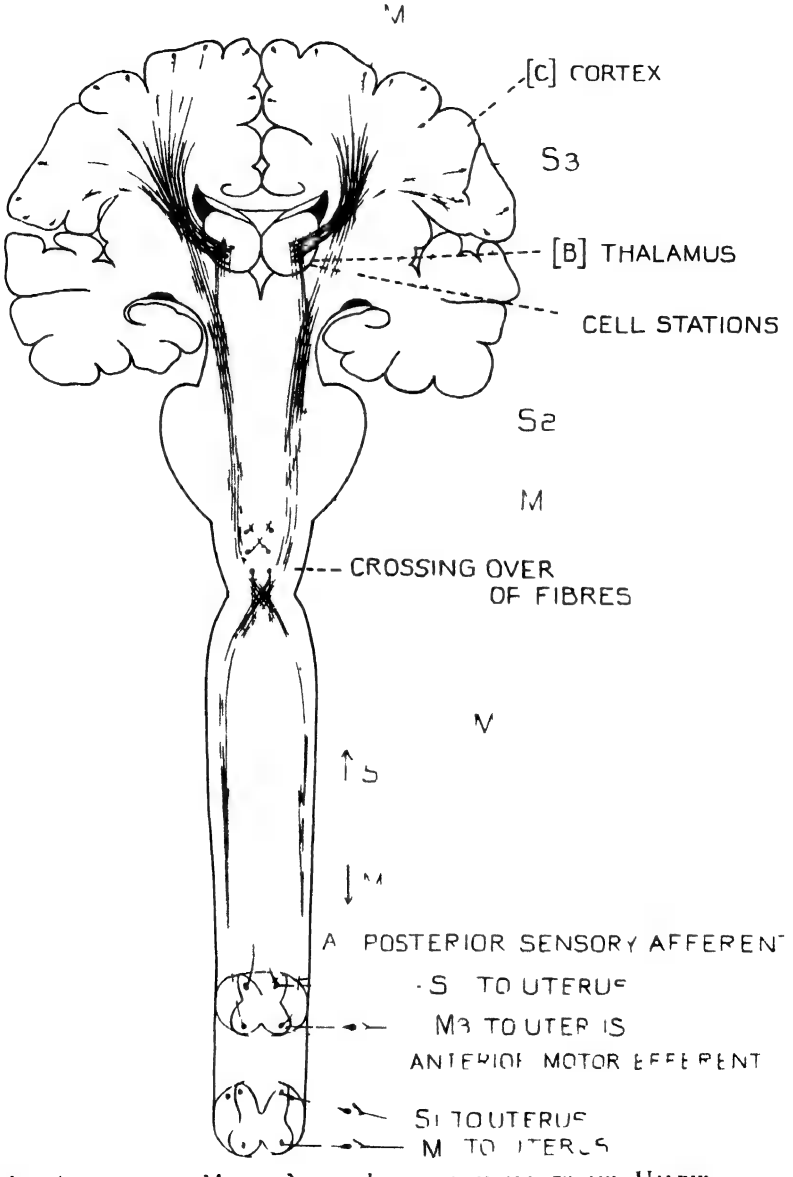
(2) correlates past and present experience, b physical and psychical and so controls reaction to intensified thalamic interpretatic

(3) sends out motor impulses based on magnitu of " messages " it receives.

(M1) Cortical cells send fibres down (M2) motor tracts wh pass out by way of anterior cells of cord to (M2) mc nerves to uterus.

Therefore, if the thalamus is over-sensitised by emotional stimu (fear) the sensations of labour are exaggerated and relaid by S3 the cortex in a magnitude out of all proportion to the degree uterine stimulus. Cortex C replies by way of M1, 2, 2 witl protective muscular contraction of fibres supplying circular mus of uterus which inhibit the course of labour. In that way i becomes an inhibitor of labour and the instigator of pain.

PLATE III



The Sensory and Motor Nerve Track from and to the Uterus.

injury or pain stimulus. For without consciousness there is no pain ; therefore pain is not simply a sensation in the human being ; it is the interpretation of a stimulus within the consciousness. If we remove the consciousness by any of the modern means employed for the purposes of surgery, there is no pain.

My definition of pain is " a mental interpretation of injurious stimulus." The biological purpose of pain interpretation is protective, and it results in muscular activity to the end that the individual may either defend himself or escape from impending danger. For instance, if a finger is accidentally put on to a hot stove, almost before there is any conscious mental interpretation of what has happened, it has been removed ; the muscular activity of protection has been immediately employed by removing the injured part from the injurious stimulus. Pain is also a protector inasmuch as it gives rise to experience and association which is exemplified by the small boy who withdraws his hand almost irresistibly from the cane

There are, however, pains from which we cannot escape. They may be associated with muscular rigidity, but there are some which it is difficult to explain. The pain of a carbuncle, the pain of a dental abscess, and so on. But for our immediate purpose it is sufficient to recognise that such pains are associated entirely with abnormal or pathological conditions, and are not in keeping with natural health.

There is no physiological function in the body which gives rise to pain in the normal course of health. When the natural urges to perform are associated with discomfort, it usually indicates that the physiological balance is being strained. Excessive hunger may be considered a pain ; excessive thirst certainly is a pain. When the bladder should be emptied or when there is a strong desire to empty the bowels, these urges may be described as pains, but they are protective, and are demands which in the natural state would be satiated before discomforts arose. Once again we must ask the same question—How is it that the very natural function of childbirth should so consistently be associated with pain amongst the cultured and civilised races ?

Next we must understand how pain is felt. There are distributed over the surface of the body and upon various internal organs and structures, minute nerve endings which we know as pain receivers ; scientifically we use the word " nociceptors." The distribution of these nociceptors has developed as the human being has been evolved from primitive animal life. Since they are in the main protective agents, they are placed in those positions upon the body and within the body which are most likely to suffer from attack.

Those parts of the surface of the body which are exposed to injury have a liberal supply of these pain receivers. In the primitive eras of human development we were most likely to be injured by tooth and claw; therefore the greatest profusion of protective bodies were grown over the most vulnerable areas of the body, and where injury would have the most serious consequences. The sides of the neck, under the arms, the abdomen and the chest are all extremely sensitive places, for if engaged in combat it would be here that tooth and claw would be most likely to inflict damage which would place us at the mercy of our foes. If we watch two kittens at play we can see where the nociceptors are most liberally distributed; there are certain spots on each other's bodies which they endeavour to grasp in their teeth, and there are certain places where their claws seem instinctively to attack. They are playing, but practising the more serious art of attack and defence.

But we are not concerned to discuss the pain receivers of the surface of the body so much as those associated with the abdominal cavity. The intestines, internal organs, and in particular the uterus, are not likely to be injured either by cold or heat as they are protected by the abdominal wall from those possible causes of injury, but they are supplied liberally with pain receivers which record excessive tension or laceration of tissues. The intestines and the uterus can be burnt, cauterised, handled and moved without any sensation of discomfort to the patient, but if either of these is strained or torn, considerable pain and shock is the result. All pain receivers are able to convey one sort of pain only to the brain; they are therefore called specific nociceptors. Some record cold, others heat, others excessive tension, laceration, pressure, etc. It follows, thus, that the only type of pain that the uterus can record is the pain caused by excessive tension or by actual tearing of tissues. The pains of labour, therefore, must result from one or both of these specific stimuli. So we must ask ourselves: Does nature intend that childbirth shall be accompanied by laceration and injurious tension? If it does, why has not this important structure adapted itself to its function, according to the law of Professor Julius Wolfe, which, in short, was "Structure is adapted to Function." If nature does not intend this laceration and injury, then those pain receivers are there to respond only to stimuli other than normal. Again we must enquire—Against what is the uterus protecting itself by giving pain sensations in carrying out a perfectly natural function? I hope we shall be able to explain this paradox as the argument evolves. The only answer is that during labour something occurs that is not in keeping with the normal design of childbirth. When a painful stimulus is recorded by a

nociceptor, it is conveyed by nerves to the centre of perception in the brain. Here there are structures which interpret the quality of the stimulus. From this interpreting centre, fibres are relaid to the motor part of the brain from whence messages can be sent to the muscles which give rise to protective action. Perhaps it is easier to understand this by the analogy of a telephone exchange. The nociceptors receive the message and send it to the exchange where it is interpreted. Accurately received and interpreted, it is relaid to the centre of defence organisation whence urgent instructions are despatched to the muscles of protection. From the uterus, painful sensations are sent by nerve fibres through various relays to the centre of the brain known as the thalamus. The thalamus interprets the nature of the stimulus and sends on to the cerebral cortex the necessary message which precipitates a response down the spinal cord through what is known as the rubro spinal tract of nerve fibres, and that response gives rise to protective activity. There are obviously several places where this interpretation can give rise to false perceptions of sensations ; that is to say, if a sensation in the uterus is interpreted as a pain by the thalamus, then the thalamus, being prompted to make this error owing to certain accompanying circumstances, can send to the cortex an entirely false impression of the sensation it has received from the uterus. Unfortunately, there are many conditions which will make it easy for the thalamus to misinterpret stimuli, because this highly complicated part of the brain not only deals with the purely physical stimuli from the body but also with the special senses and with the emotions and all forms of associated stimuli through the mind proper. If, therefore, through such emotional misunderstanding the thalamus has become over-sensitive, it can interpret an ordinary sensation—that is to say, a normal sensibility—as a pain, owing to the exaggerating influences to which it has been subjected. Fortunately, however, the cortex and other parts of the brain appear to exercise restraining influence over the thalamus preventing it, as it were, from giving way too enthusiastically to subversive outside influences.

If with the aid of the accompanying diagram this can be clearly understood, the key to uterine pain in normal labour becomes more obvious. In a paper written to the *British Medical Journal* by Sir Henry Head, the famous British neurologist, he wrote : " The mental state of the patient has a notoriously profound influence over the pains originating in the pelvic viscera." In other words, the sensations arising from the uterus may be influenced in the most astonishing way by the mental condition of the woman concerned. Of course we see in other matters how true this is : people who

have become extremely anxious about the pain they have heard they are going to suffer when they are about to be given an inoculation, are invariably those who feel it more than those who know that a simple inoculation given skilfully is practically painless. Dentists have frequently noticed the same thing; those patients who dislike intensely their visits to the dentist, and who expect to suffer agonies, are far more likely to have real pain than those who go knowing that in the hands of a good dentist they are unlikely to suffer any unnecessary discomfort.

Perhaps with this explanation my law of pain interpretation will be more clearly understood. The law is: *A stimulus of fixed magnitude applied to any specific sensory receptor produces a motor response commensurate with the intensity of its interpretation.* It is extremely important that this should be recognised in normal uncomplicated labour, for a stimulus of fixed magnitude may be to Mrs. Jones nothing that matters, but to Mrs. Smith an agony of great intensity, whereas Mrs. Brown may consider it a reasonably bearable discomfort. These variations in the interpretation of a stimulus of fixed magnitude depend entirely upon the condition of the mental attitude towards that stimulus of Mrs. Jones, Mrs. Smith and Mrs. Brown at the time of labour. In other words, it will depend upon the intensity of their interpretation of the sensation.

Now, since theoretically nature did not intend labour to be painful but in practice it is painful, let us consider more in detail what actually happens. A woman about to start her first labour has been told to expect certain sensations; if she has been told wisely, her expectations have not necessarily been associated with pain, but rather with new sensations. The contractions of the uterus will be a new experience to her. If, however, emotional influences have definitely increased the intensity of her interpretation of these new sensations, they may quite easily be interpreted as pain. Should that be so, the thalamus, in conjunction with the cortex, immediately sets up protective mechanism. Now, the great protective nerve mechanism of the body is the sympathetic nervous system, and when protection is called for by the thalamus, that nervous system overrides, by its powerful influences, all other nerve stimuli throughout the body. It activates the machinery for either fight or flight; it creates a state of tension throughout the individual which provides for an increase of muscular power. No one can run faster or fight more violently than when thoroughly frightened, particularly if their alarm is justified by painful sensations. Such reactions activate sympathetic nerves, and it must be remembered that the sympathetic nerve supply to the uterus will also come into action, but the sympathetic nerve supply to the uterus

unfortunately supplies the circular fibres which inhibit the opening of the uterine outlet and resist the expulsive efforts of the longitudinal fibres of the uterus. They receive stimulus from the pelvic autonomic which is easily overridden by the sympathetic. Directly, therefore, the protective apparatus is brought into play in order to overcome or fly from the painful recording of uterine sensations, so much more is the cause of pain introduced, for the outlet of the uterus instead of being lax and easily dilatable, is made tense, and the contractions of expulsion by the long fibres are opposed by muscles resisting their efforts.

But it will be remembered that there is also a local nerve supply for the uterus which enables the longitudinal fibres to continue to contract even though the autonomic supply has been cut out by the sympathetic over-stimulation. So the uterus goes on contracting just the same, in spite of the sympathetic nervous system being activated. We have then a condition of the expulsive fibres pushing against the circular fibres ; we have two opposing groups of muscles working one against the other. The normal and natural result of this is that there is excessive tension, and soon the simple sensations of uterine contractions—which have been misinterpreted by the thalamus as pain—have given rise to a neuromuscular condition which actually causes real pain. Therefore, uterine contractions become painful, and we find that through the misinterpretation of non-injurious stimuli, a painless natural function is made into an extremely painful and therefore abnormal condition.

The cause of uterine pain in uncomplicated labour is therefore due to the condition of the interpretation of the sensations to which a woman is subjected. The false interpretation of those sensations sets up nervous impulses which give rise to resistance at the outlet ; resistance at the outlet gives rise to excessive tension which stimulates the nociceptors placed there by nature to warn the patient of that condition. Then real pain supervenes. With the accompaniment of shock, delayed labour and other complications which it is not necessary to discuss at this stage, uterine pain is real if the interpreted sensations of labour have been false. How can we rectify the interpretation of sensation ? What are the known causes of misinterpretation of uterine sensations which give rise to true uterine pain ?

The great intensifier of stimulus interpretation is fear. This emotion, like pain, is protective and produces through the sympathetic nervous system a state of tension within the body. Thus we have the three great evils : Pain, Fear and Tension. It is this syndrome which is responsible for the pain of labour. My contention is that the pain of labour is the result of an assault upon a primitive

function which is intended to be painless. The attack is made by forces against which no protective apparatus has been developed, because the forces have not been understood and, which is probably more important, the method by which the attack is made has not been recognised. If there is any truth in this theory, it should be possible to demonstrate in practice how and where this vicious circle may be broken through. Modern science has laid down the smoke-screen of anæsthesia in order to hide its own lack of perception. It appears, however, that a more rational method of approach to this problem would be to discover the most vulnerable point at which to make a counter-attack, not only to resist this dangerous invader which we call fear, but also to set up an efficient protective mechanism so that the primitive function of painless childbirth may be recognised by civilised women for all time as both natural and normal. If fear can be eliminated, pain will cease. Means have been devised by which fear has been eliminated in a long series of cases over the past ten or fifteen years. In varying degrees, pain has been conspicuous by its absence and, most gratifying to me, the conscious sense of satisfaction has taken its place. But more surprising has been the fulfilment of what theoretically should be the mental condition of the mother when her child is born—an ecstasy unsurpassed by any previous experience in her life. There are certain true physical states, however, which allow of the natural intensification of stimuli. We call them the factors which predispose to the low threshold of pain interpretation, and they should be discussed before attacking the most persistent and powerful enemy of natural childbirth, which is fear.

CHAPTER IV

UTERINE CRAMPS

THERE is a condition which sometimes occurs in labour which is probably one of the results of excessive tone in the circular muscle fibres. It is known as Myoclonia Uteri. It may be recognised by an acute tenderness of the abdominal wall and uterus which persists between the contractions. I have noticed it on several occasions, particularly in highly excitable and nervous women who have not been educated during pregnancy and who have not been instructed in those methods by which the circular fibres of the birth canal may be relaxed. Labour has usually been prolonged, and because of difficulty in explaining the absence of progress, another opinion has been sought. This somewhat puzzling condition is a real danger both to mother and child, and rapidly produces a breakdown in a woman's courage.

With each contraction of the uterus, the woman has severe pain, not in the back or over the sacrum or in the groins, but over the whole body of the uterus. If a hand is placed over the uterus during a contraction, she will immediately cry out and protect herself by pushing the hand away. She gives the appearance of suffering intense pain, but different from the ordinary pain of labour. After the contraction has passed, the tenderness of her abdomen is such that she will draw up her knees, bring her shoulder forward, in an effort to remove even the tension of the rectus muscle or the pressure of her abdominal wall on to the tender uterus.

The condition usually arises after a perfectly normal onset of the first stage, with regular, strong contractions. Once this cramp-like pain has commenced, it tends to get more acute, until finally the earliest sign that a contraction is about to occur produces a state of terrified anticipation. This is probably the true pain of progressive muscular ischemia. When we consider the anatomical structure of the uterus, recalling in particular the disposition of the large blood sinuses within its wall, it appears that the integrity of its circulation during labour is dependent upon the pump-like action by which the blood is expelled from the organ during contraction, the sinuses filling with fresh blood supply with each relaxation of the muscle wall.

But these sinuses have a peculiar arrangement of circular fibres about their lumen ; bands of these fibres run in figures of eight, or in intertwining cables, throughout the middle layer of the uterus.

When the circular muscle fibres remain in a hypertonic state during labour, there is probably incomplete relaxation of the organ between its contractions. It follows, therefore, that there is incomplete expansion of the blood sinuses, and although they may be completely emptied, they are not refilled to their normal capacity. In this way, the nutrition that should be brought to satisfy the relatively enormous demands of the uterus at this time is less than is required to enable the muscle to carry out its work efficiently.

Since the sympathetic nervous system also supplies the circular fibres of the uterine arteries, it is probable that they, too, play a part in producing a state of relative ischæmia.

Langley and Anderson (*Journal of Physiology*, 1893–94) found that on stimulating the peripheral branches of the hypogastric nerve, they obtained pallor of the uterus on the side stimulated.

Lewis (*Archives of Internal Medicine*, vol. xlix., p. 713, May, 1932) described the results of experiments upon muscle pain when the circulation was partially restricted. He says the pain has a peculiar and characteristic aching quality ; he also suggests a point of considerable interest, which is that the pain is not the result of cramp, because it persisted when relaxation was complete between the muscle contractions. I have noticed this in labour : that although between the pains the uterus feels relatively soft it remains painful, which is unlike ordinary muscle cramp. Lewis suggests that the cause of this pain is an impairment of circulation, there being too small a flow of blood both to and from the muscle to dispose of the metabolites. These substances cause pain when in excessive concentration in the tissues. They are normally formed by healthy muscle contraction and carried away if the flow of blood is free and of sufficient volume. If the volume, however, is diminished, the metabolites remain in increasing concentration in those fibres which are sparsely supplied.

The picture of myoclonia uteri represents a pain more accurately described as a prolonged ache, with acute exacerbations, rather than the recurrent pains of labour. From my own experience I know what an appalling pain relative ischæmia can produce. At the Battle of Arras in 1917, I wore a new pair of riding boots which were made rather tight for me, but which were quite comfortable so long as I was in the saddle. I went forward with a detachment of the regiment into the village of Fampoux. Not long after I arrived, I had a message to go back a mile and a half to a railway embankment which was being shelled, and where a good many casualties had occurred. In the meantime, one of the officers who was forward with us had his horse shot ; it was suggested therefore that I should let him have my horse and walk back to the embank-

ment, as it would not only be much safer for me to walk, but he might have to move at any moment. This I did, and I shall never forget the agony of that walk. Through deep mud I trudged in those tight boots; as my calf muscles began to require more circulation to enable them to do the extra work demanded of them, so much the tighter did my boots become. About half-way, I decided to cut them off, when I found that I had left every instrument I possessed in my saddle bag. The fact that it was snowing and blowing a blizzard, and that the Germans were being peculiarly unpleasant, passed almost unnoticed under the influence of that pain. Eventually I struggled to my destination, and shouted to the first man I saw for a knife. In spite of the weather I was pouring with perspiration, and appeared to be in such a condition that they thought I had been hit somewhere. The boots were hastily ripped up and rarely have I known such a rapid and gratifying sense of relief as I experienced when the relative ischæmia of my calf muscles was cured Frequently in the Great War, when puttees were part of the uniform of soldiers, a halt had to be made, or men had to fall out of the ranks, unable to walk any further because of the pain, when their puttees had been put on too tight to allow of free circulation in the calf muscles which the rhythmical contractions of marching demanded.

Not infrequently I have observed in the prolonged labours of frightened women this tenderness of the uterus; the gradual, increasing inefficiency of the contractions and the final breakdown of what had appeared to be a straightforward labour.

I have never seen this occur and I have never found a uterus tender to the touch between contractions in a woman who was educated in and who practised natural childbirth. I venture to offer this as an explanation of a very distressing condition, and suggest that it is a secondary cause of pain in keeping with the thalamic theory of pain-appreciation in labour.

CHAPTER V

FACTORS PREDISPOSING TO LOW THRESHOLD OF PAIN INTERPRETATION

Anæmia. It may not appear at first sight to be the place to discuss blood conditions in pregnancy, but it is a subject which in my opinion is not generally given attention in proportion to its importance. I have rarely seen a good example of natural labour in a woman whose hæmoglobin had been allowed to remain below 70 per cent. from thirty-three to thirty-four weeks onwards. I do not mean that their babies arrive with difficulty, but not infrequently labour is long, exhausting and painful, with a slow recovery during the puerperium. I do not refer to severe cases of macrocytic and microcytic anæmia or the " blood diseases," but to women who are short of iron apart from gross blood cell changes. The " physiological anæmia " of pregnancy—that is, the plasma increasing in proportion to the number of red blood cells—should be compatible with good health, if it is accepted as a normal and natural state. The anæmias of pregnancy are fully discussed in " Antenatal and Postnatal Care " (Browne, 1939), but the clinical aspect in relation to pain interpretation deserves some attention.

The percentage hæmoglobin should be estimated at antenatal visits as a routine ; it is simple to do and takes very little time. If it is low, but follows, during pregnancy, the normal curve of variation—that is, falling slightly at about twenty-eight to thirty-two weeks and then picking up—it does not require special treatment. But if increasing tiredness, exhaustion after normal activities, breathlessness without reasonable cause, depression and an absence of desire for meals are complained of, treatment is indicated. It is not suggested that the woman feels ill, but may say, as many do, " Feeling fairly well, but get so tired." The exhibition of Blaud's, 90 grains a day, or Ferri et Ammon Cit. up to 120 grains a day (if no diarrhœa), often works like a charm, and with the rising hæmoglobin she will find new strength, spirits and appetite, and quite likely tell you she has never felt so well in her life.

In " Certain Aspects of Pain " Henry Head wrote, " Anæmia is another cause of diminished general resistance to painful impressions." Many of its symptoms in pregnancy are those factors which during labour lower the threshold of pain interpretation.

Let us think for a moment of a woman who, tired in mind and body, short of hæmoglobin and forced to eat unsuitable food,

bravely faces what she has previously endured, or what she believes she must endure. Labour commences—quite soon she is in pain ; a weary, weeping woman. Whether the tiredness of body is there before or results from expenditure of nervous and physical energy at the time, does not alter the result.

Tiredness of Body Intensifies Pain. An ache becomes a severe pain ; the mind is worn out and seeks only peace.

Weariness of Mind Intensifies Pain. In labour, the atmosphere of peace is a reinforcement to a well-nigh broken resistance.

How many nurses and doctors realise the agony of conversation, often about ill-chosen topics ? There are awful people who try to cheer their patients by bright remarks. The mind should be rested, and some measure of pain will be spared.

As I sit with women in labour, I not infrequently remember those dark days in 1915 when I arrived from Gallipoli at the Blue Sisters Convent, Malta, blind in one eye and with clouded vision in the other, almost completely paralysed below the waist, longing to live, yet wishing that I could escape from life. I recall the horror of those sympathetic visitors who brought me flowers I could not see ; told me to cheer up, I should soon be home. " Remember how lucky you are to be alive " was their parting comfort. It made my whole body burn with agonising tension ; my head throbbed and uncontrollable twitchings came into my legs ; my back felt as if it were torn in two at its injured place. I perspired, and had I been able would have yelled in a wild mixture of pain and fury. One of the Sisters came in after they had gone, and saw me alone in my trouble. I had been given a room to myself. She was a tall, stern-looking woman of some fifty years, whose features I could not clearly define. She took my hand in hers, and stood silently beside me. After a time she knelt beside my bed, and in broken English said, " I will stay with you. We will be peaceful, you in your way and I in mine."

Can I ever forget the miracle of that understanding. My back relaxed and ceased to torture me ; the uncontrollable spasms left my legs ; my clouded eye seemed to clear, and before I sank into my first long sleep for weeks, I saw her head bowed and her eyes closed as she sought in her own way the peace that swept over me. We may all have our own way of bringing peace to women in labour, but it is in the end a balm of restfulness to a tired mind—a mind which has no energy to withstand the irritations that intensify its pain.

Depression and disappointment are potent pain intensifiers. In labour, when the long first stage seems unending, when there is no reason to believe the pains are any good, women are liable to become

depressed and acutely disappointed. The sameness of the cycle of events, the uselessness of control, wears down the fortitude. There is no relief but in tears, no comfort in protracted hope. Each contraction becomes more painful ; it is waited for with fearful anticipation ; the recurring phases of expectant tension hold memories of recent discomfort as persistant pain impressions, and the inevitable contraction adds " fuel to the fire." The misery of labour when depression and disappointment overcome the patient spirit of courage is a picture of which all obstetricians should be ashamed. It is not infrequently initiated by two great faults in the care of women : loneliness and ignorance.

There is no greater loneliness in the life of a human being than being alone with your own suffering ; and no suffering is greater than the mental torture of impending agony from which there is no escape and of which there is no understanding.

Do we remember these inner workings of a woman's mind when the hand is flung out to us, and we are challenged with, " Can't you do something for me ? " How often companionship and sympathetic information, made practical by instruction, will change the scene and refortify the forces of consciousness that she wishes to retain—but how often the physician himself has only drugs and anæsthetics to offer.

Loss of control allows all stimuli to run riot. The slightest discomfort will become an unbearable agony, and all the wiles and violence of animal nature are utilised in the effort to be freed from torment. It results from various causes, and in hysterical women whose lack of balance is enhanced by pregnancy and labour, there is no rule of thumb treatment. Care must be taken during pregnancy ; all influences likely to intensify her pain producing stimuli must be removed so far as possible. But remember the value of sleep ; as Henry Head used to say, " Sleep, that most salutary means of increasing central control."

But the state should be considered pathological, and requires special consideration in a work not primarily concerned with normal and natural labour. At the same time we must recognise that loss of control is due to a breakdown of cortico-thalamic function, and as such should concern the obstetrician who aims at harmonious neuro-muscular mechanism in labour. Not many weeks ago a pathetic woman came to see me, a nervous wreck, whose happy life had been ruined by the birth of her son. She had ceased to love him ; she felt she was no good in the world ; she loved her husband but was a handicap to him. What could I do ? I asked her about her son's arrival and she said she had written it out soon after he arrived, for some reason or other. We talked

for some time, and next morning she brought me the letter she had written and never sent :

Loneliness

"... I was shown into the labour room *and left.* I began to feel unbearably ill, with severe pains, about 7 o'clock. I

Tiredness

paced the room *alone*, sitting down when I felt *too exhausted.* Nurse had told me not to ring for her, as she could not stay with me. I continued like this until 10 o'clock. When the doctor arrived, he examined me.

Hopelessness and Hearsay

By then the pains seemed almost *more than I could bear. I overheard* them say baby would not be born that night and I would not be able to go through the night like it. I felt too

Ignorance

ill and exhausted to get off the bed by then. *I did not know* what was going to happen. I felt quite prepared to go through with it, though, because I wanted my baby. I was given medicine at about 10.30 but was not told what it was. What followed afterwards was like a ghastly nightmare. I begged the nurse to stop with me, but she just said that the baby

Lack of sympathy

would not be born that night, I was to make no noise, *and left me.* I dropped into a sleep, and woke with most awful

Fear

sensations and pain about 12 o'clock. *I screamed;* there seemed to be lots of blood ; it was even over my hands.

Loss of control

I prayed and cried. After what seemed to me a long time nurse dashed in, looked at me, dashed out to phone another nurse and the doctor. I seemed half-dazed and unconscious

Ill-chosen talk

part of the time. *I overheard* them say, 'We shall have to do something with her ; she has not got the strength to help herself.' One nurse was pulling my arms above my head ; the other was pressing my tummy down. They continued

Exhausting treatment

slapping me to keep me awake, and *pulled me about unmercifully.* For days afterwards I felt sore and bruised in every limb of my body. They buried my head in pillows to stifle my screams ; I thought they would suffocate me. When doctor stopped them, I was gasping for breath. I was dazed part of the time, yet I seemed conscious of what went on.

Baby was born about 2.30 or 3 o'clock ; I remember the relief as baby was born. They said, 'He is a beautiful boy.' I tried to see him, but could not even lift my head.

Loneliness with depletion of nervous and physical energy

I was left afterwards until 6 o'clock, when I was woken and carried downstairs. Water was put by me for me to wash myself. I felt too ill, so was *left alone.* Breakfast was served at 8 ; I drank my tea but could eat nothing.

Natural instinct persisting

Looking back, I do not remember asking for my baby. He was brought to me about 10 o'clock. *I thought he was wonderful.* He weighed 7 lb. I felt so weak, though, he seemed too heavy for me to hold. I *felt very happy* about John, and made such wonderful plans for him.

Exhaustion has sapped her resistance. Normal instinct is supplanted by escape urge and dangerous depressive state

After I came home, I really felt too ill and weak to look after John and my home. He began to worry me. I often cried myself to sleep after putting him to bed. I had nightmares, and lived through all that had happened again and again. I felt all that I wanted was peace ; just to *take John with me and sleep for ever.*"

It seems impossible that such a thing can happen in our time. I have no reason to disbelieve a word of that letter. She knows nothing of labour but her own experience. We must be thankful that such labours are not often heard of. All the intensifying forces of pain and trouble were exemplified ; I have noted them in the margin. The horror of this treatment of a woman in labour reads more like grim fiction, but in reality it is only an exaggerated example of labour as conducted by those who fail to realise the importance of pain intensifying factors.

The centralisation of thoughts upon new sensations, upon their causes and results intensifies the reactions to stimuli which normally would never reach the consciousness. *Would it help my readers to know how to make a uterine contraction during labour hurt? Inquire of the woman before it starts where the last one hurt her ;* agree that it was a bad pain ; put your hand on the uterus and feel it beginning to contract, then say briskly, " Now, it's going to hurt. Try and tell me when the pain is at its height. Grip my hand ; set your teeth ; concentrate on your pain ; close your eyes, and suffer " ! ! Then you will see a woman having pain. That appears to be Professor Chassar Moir's line of thought by which he has endeavoured to investigate the immediate cause of pain in labour. He described it in the paper upon " The Nature of Pain in Labour " at the Edinburgh Congress, 1939. He said, " In order to obtain exact knowledge of the relation of a uterine contraction to the time of onset and duration of the pain experienced by a patient, I have recorded in graphic form the waves of intra-uterine pressure as registered by a small balloon (5 c.c. capacity) inserted high in the uterus above the presenting part. The patient was given a bag to hold in her hand, and told to tighten and relax her grip with a rapidity proportional to her suffering. The bag was connected to a tambour which registered on the moving drum directly above the uterine tracing. This method has given valuable information, but it must be remembered that the accuracy of the record is entirely dependent on the patient's intelligent co-operation, and that a period of great physical suffering is not the time when accuracy of judgment and co-ordination of movement is best displayed." He continues to describe many other interesting phenomena deduced from his pain-producing experiment. Would it not have been more interesting to have distracted her attention from the pain, relaxed her mind and body, instead of introducing concentration on pain and intensifying muscular movements. We cannot help wondering what result Professor Chassar Moir would have obtained from a natural labour.

Mrs. D. (age 30 ; weight of baby at birth 8 lb. ; previous baby

stillborn—she could not tell me why or how this occurred) wrote to me as follows : " Having recently had a stillborn child after a very painful labour, I was doubtful of the possibility of producing a live baby, and quite incredulous at having a baby without pain or anæsthetics. . . . I found I was able to relax during the contractions, and was even able to sleep and doze during a good part of the time. This made an immense difference to the amount of pain felt. The peacefulness was very helpful, and contributed in a large measure to the beauty of the whole experience. To be allowed to lie quietly on one's bed with no one bustling about and continually enquiring as to the pain, or otherwise . . . left one free to produce one's baby." *I have many similar reports upon treatment which—amongst other things—assists in decentralising the thoughts from the focus of activity, and so inhibiting the intensification of normal stimuli.*

But this brings us within sight of the influences of suggestion. It might be said that the recording experiment was conducted under the influence of strong suggestion that pain must essentially be present, whereas Mrs. D. was influenced by auto-suggestion that very little if any pain was present. " Yet this is not new," writes Behan (" Pain," 1915), " for physicians have made use of this principle even as far back as the time of Pharaoh."

In labour, however, *auto-suggestion* does play a definite part in pain production. As the result of impressions stored up in the memory centres, either from past experience, hearsay or mental imagery, subjective pain stimuli may arise from vivid reconstruction or some closely associated factor. As will be shown later, such memory impressions are present in the vast majority—probably all women—at the commencement of labour. As MacDonald Critchley writes in " Observations on Pain " (Lang Fox Memorial Lecture), " The conception of psychogenic pain is closely bound up with such questions as the memory and the mental imagery of pain."

This is profoundly important in labour, for muscle sensibility can so easily be felt even in the absence of pain and auto-suggestion occurs from muscle sensation influenced by phylogenetic and/or ontogenetic experience. Thus, uterine contractions may be responsible for strong auto-suggestion. The nature of uterine contractions is especially likely to produce this state : the weak beginning working up to an acme and passing into a decline. At the acme of a contraction—and often before—there is a definite sense of impending agony, which, under strong auto-suggestion firmly convinces the woman of the imminence of torture. She loses control in anticipation of that which she believes and fears to be

inevitable, and like all frightened people, she does not hesitate to "yell before she is hit." When control is maintained, it is quickly realised that the sense of impending pain that is experienced at the acme of uterine contraction, does not materialise. Demonstrations of escape and resistance, therefore, do not appear necessary. This is another cause and intensifier of pain perception which can be eliminated by education and treatment.

But one cause more difficult to deal with is *suggestion*. Quite apart from pain sensations recalled from the memory centres is the suggestion of pain consciously or unconsciously conveyed to the woman in labour by people and things about her. Every clinician knows that pain can be produced by suggestion; it is indeed easy to convey strong suggestion to a woman who believes in the necessity for pain. Her whole sensory receptor mechanism is attuned to exaggerated stimuli, and can perceive, in collaboration with her receptor centres, only those stimuli which are ripe for interpretation as painful. Thus, suggestion of pain is conveyed by the atmosphere of the labour room; it emanates from doctors, nurses and relations. They all believe in pain; subconsciously or consciously they suggest, expect and even presume pain. Upon the sensitive mind of a woman in labour, such authoritative suggestion, though only demonstrated by facial expression, actions for the relief of suffering, preparations for pain prevention, surgical precautions ostentatiously observed for the protection against the dangers of sepsis, are a powerful adjuvant to painful sensations.

"Be brave, darling," said by the mother as she leaves the room with a tense, pallid look of sympathy, is an excellent pain producer.

"Don't worry; now, don't worry; plenty of anæsthetic when it gets too bad. Not yet, of course; you must put up with it as long as you can," from the cheerful medical man is confirmation of pain.

Wonderful heterosuggestion, so that neither she nor they are "ignorant" enough to expect anything but the tortures of the damned.

So fear creeps in to join forces with pain, and these twin enemies of childbirth by propaganda, deceit, subtlety and brutal inhumanity, destroy the structure and mechanism of labour, and lay waste the glorious edifice of motherhood which stands unprotected from their violence in the green pastures and beside the still waters of human love.

CHAPTER VI

FEAR

THE importance of the influence of the emotions upon pregnancy and parturition has been recognised during the last few years. The value of protecting women from fear is frequently referred to in writings and discussions upon antenatal care.

I think, therefore, that it will be helpful to some readers of this book who have not inquired into the nature of fear, if a short outline is given of the natural uses and the acquired misuses of this emotion.

Let us ask first : What is fear ? It is an emotion which arises from the primary instinct of flight. In its earliest form it is an alertness to the presence of danger. It is the natural protective agent which enables the individual to escape from danger. In spite of its importance in the preservation of the species, in its most primitive form it is said to be roused by only two types of stimulus. A new-born babe is said to react only to falling, and to sudden, sharp noises. From my own experience I have found that within a few hours of birth a baby will start at a loud noise near to it such as a shrill whistle, the dropping of an enamel dish or the slamming of a door. It is, however, with some difficulty—possibly with considerable doubt—that I accept as proven the instinctive fear of falling. A baby is frightened, unquestionably, when it falls, but I am inclined to believe that it is not alarmed until it has fallen. There is a difference between the fear of falling and fear when falling or having fallen. If a baby appears to be frightened because it is nearly dropped by someone who is carrying it, it is subjected to sudden and unnatural movements which are made in order to prevent its falling. In the absence of the muscle-sense of support, it may or may not appear to clutch or stretch out its limbs in a manner which has been described as " trying to hold on." New-born babes, however, do not hold on to things consciously, although reflexly their fingers may close if the palm of the hand is stimulated. Even this I have not found to be invariable.

Another important factor must be remembered : An adult who nearly drops a baby suffers from acute alarm which is transferred to the infant, and finally, if the infant is actually dropped, or falls, it feels considerable discomfort from the experience. When these factors are taken into account it is not unreasonable to deduce that the so-called fear of falling is in reality similar to all other fears in one respect—it is acquired.

The accepted teaching that we are born with a fear of sudden noises is also debatable. The auditory sense of a new-born child is untried. It is difficult to know how much a new-born babe can hear, or in fact if it can record what we may term ordinary noises at all. A tuning fork brought to the ear and taken away again does not appear to create any impression. There is obviously no interpretation of the nature of sounds, even though it may be conscious of different tones. My own opinion is that both the hearing and the sight are collectors of impressions without any interpretation of those impressions being made. If, however, violent wave motion is set up in the proximity of the ear by loud and sudden noises, it is not frightening to the child, but actually painful. It is through the association with the painful impressions that fear is acquired.

For many years I took for granted the accepted teaching of the two inborn fears, but upon investigation I am inclined to believe that babies are born entirely free from any instinctive fears.

The human body is constructed in such a manner that it is not only adequate for the developmental life of infancy and childhood, but also for the exigencies and emergencies that may arise during that period. The protective machinery necessary for the child under the conditions in which it will live is supplied and ready to be used when required. There is no more reason for a child to be born with inherent fear than with any other emotion. The necessity for protection from injury and harm calls into use the machinery provided for that purpose when experience or association sets it in motion. All fear, therefore, in the human being is acquired either by suggestion or association. It is entirely a protective mechanism, and is activated by apparatus which has been efficiently developed for that purpose by the phylogenetic experience of the species. Ontogenetic fear is, therefore, dependent for its development upon the receptor and perceptor organs built by Nature upon the experiences of the past.

Professor Sir Walter Langdon Brown, in a paper on "Fear and Pain" (*Lancet*, October 13th, 1935, pp. 911 and 912) writes: "What is the genesis of fear? Fear is the exaggeration and sometimes the perversion of that alertness to the presence of danger which is such a valuable defensive mechanism."

Professor Crile, in "The Origin and Nature of the Emotions" (Saunders, 1915), writes: "Fear arose from injury, and is one of the oldest and surely the strongest emotion. By the slow process of vast empiricism nature has evolved the wonderful defence motor mechanism of many animals and of man. The stimulation of this

mechanism, leading to a physical struggle, is action, and the stimulation of this mechanism without action is emotion. We may say, therefore, that fear is a phylogenetic fight or flight."

Sadler, in "The Mind at Mischief" (Funk and Wagnall, 1929), states: "Fear is the emotion associated with the inherent instinct of flight."

Certain animals which have been provided by Nature with other means of defence do not exhibit the emotion of fear. The skunk relies largely for its protection upon the production of nauseating odours. The porcupine, and probably the hedgehog, defend themselves from attack by exhibiting a mass of dangerous weapons to the assailant. The armadillo, the tortoise and the turtle present impenetrable fortifications into which they retire for safety. The oyster closes its shell, but the trout dashes to its hiding place. Protective apparatus may be found in all species, suitably developed to afford relative safety from hereditary foes. It is the arrival of new enemies with implements and means of attack which are the real danger to life. The ingenuity of culture has circumvented the defensive armament of phylogeny. Fight with or flight from the primitive aggressor was successfully conducted about and within the fortifications of primitive man. The disposition of the defensive forces and the system of warnings enabled the fighters to man the battlements, and those who fled were protected by the ancient moat and portcullis when within the walls of the castle. Fear had adequate sublimation. It was replaced by action in fight or flight and thereby it served its protective purpose. When danger had been avoided, there was no longer fear; when the fight had been successful, this emotion had no purpose. It is equally true that however great the danger, if the inhabitants of the castle had complete faith in its indestructibility and the fighters advanced in the sure knowledge of victory, there was no fear.

From this it follows that faith eliminates fear. I must emphasise this statement because of its significance when discussing this emotion in relation to pregnancy and labour.

But we must visualise a different picture. Civilisation has broken down the edifice of primitive protection. It is no longer a question of physical survival or even of physical injury. Humanity is in the open; the unseen forces of culture which assail the human mind appear in battle array armed with weapons against which we have no provision. It is impossible to escape their devastating effects. The subtlety of the attack is such that time, place and method are ever-changing. The human mind is as helpless under the ravages of civilisation as the primitive fighter is against modern methods of warfare.

The work of readjusting the minds of women occupied in the primitive function of childbirth requires as much skill, precision and foresight on the part of those who are concerned with it as the counter-measures against bombs from aeroplanes, gas attacks, magnetic and acoustic mines, submarines and all the innovations of modern warfare demand from those whose business it is to understand these things. It does not seem to be fully recognised that civilisation calls for ever-increasing resourcefulness, not only if the species is to be maintained, but also if the human kind is to be effectively reproduced. Modern armaments against man, cultural associations against woman, reinforce the foes of natural survival. We can no more afford to disregard the one than the other Fear is the strongest weapon in the hand of the enemy of motherhood. Its development in our every-day life is insidious. Like an evil propaganda, its destructive influence pervades the forces of human life. Were the man in the street to know the truth, its ravages would sound incredible. For my own part, after thirty years of close association with physical and mental derangements of health I am persuaded without a shadow of doubt that, with the exception of unforeseen accidents, the origin of every form of disease, both surgical and medical, whether hereditary or not, can be traced by careful investigation to the influence of fear upon the human mechanism. In particular I would stress that through its influence upon childbirth, fear has for many generations had an increasingly deleterious effect upon civilised people of the world.

We must be careful to understand that fear is an emotion of variable intensity. I have noticed many times that to suggest the possibility of fears being present in a woman's mind has been accepted by her as being an aspersion upon her moral courage. Fear is not necessarily abnormal ; it is a natural protective state and has no relation to funk, cowardice or chicken-heartedness. In the presence of danger, fear engendered by knowledge is the stimulus which prompts to escape, and according to that which threatens, so the method of avoiding it is adopted in the light of past experience. If a wasp settles on the hand, we know that it may sting ; most people, therefore, will either shake or brush it away. That is protection prompted by fear. We slow down, if we are wise, when passing over dangerous cross-coads ; we look in the direction of oncoming traffic before stepping into the road ; the first spoonful of soup is taken gently ; we test the temperature of the bath before getting into it. In innumerable small actions during every moment of our everyday life we take precautions or we act with caution. This is the ordinary, normal protective activity of the emotion of fear which preserves us from a host of dangers. These actions

have become what we call second nature ; they are compatible with normal human behaviour.

There is, however, an exaggerated state of caution. Since the beginning of the war we have all been asked to have our gas masks ready for use lest they might be required ; that is a reasonable precaution prompted by the fear of enemy action, but I know a man who, since war was declared, arranges the domestic matters of his home each morning before he leaves it, on the assumption that he will not return ; he proceeds to his business with a steel helmet, a gas mask, mackintosh clothing to protect him against chemicals, and a revolver in his pocket. That, we will agree, is exaggerated caution.

As students at the university, we heard many stories about " the height of precaution," and if we look around us it will not be difficult to find people living under the influence of exaggerated precaution, like the decrepit old gentleman who always wore the armour of a first-class wicket-keeper when he went out to play croquet !

It is probable that in primitive life most fears were based upon the experience of material danger, but with the development of the mind so the visualisation of the possibility of danger has increased. We may go further than that, for the laws of civilisation, the rules for safety, and the organisations to prevent personal injury are so highly developed around us that the fear of attack in the primitive sense is practically non-existent. We are much more concerned with maintenance, the economic structure of society, the stability of the social status of the individual, the relationship of persons one to another, and the pride of personal accomplishments, appearance and possessions—all these things are the foundations upon which anxiety states are built. In the absence of freedom of both thought and action, principles of doubt and associations of danger are conveyed by over-anxious parents and nurses to children from the earliest age of understanding. The speed of modern life, the grim struggle for survival and the close competitive relationships of men demand an expenditure of nervous energy out of all proportion to its physical sublimation. To a large extent the primitive machinery is obsolete. The action prompted by fear was dependent for its efficiency upon neuro-muscular fitness, whereas to-day the emotion which arises from the inability to survive by physical action must be effectively sublimated, or depletion of nervous energy results. Those who have the understanding, the ability or the philosophy to sublimate satisfactorily this cultural counterfeit of primitive action are few and far between. Anxieties and doubts are prevalent in the minds of the vast majority ; they may amount to obsessions, to

phobias and perversions of mental activity which undermine emotional stability and physical health. This condition of constant strain, whether it arises within occupational, social or domestic environment produces through the nervous system changes in the activation of the endocrine glands resulting in imbalance and discord where harmony is alone compatible with health. From this derangement, the chemical rectitude of metabolism is seriously disturbed, thereby producing a condition which increases mental strain, further depletes the nervous energy and so completes the inevitable vicious circle. No faculty or function of the human mechanism is safe from the aggressive inroads of the insidious fears of civilised existence.

The Mechanism of Fear. Since it is our object to examine in an elementary way the emotion of fear so that we may be able to deduce any influence that it may have upon parturition, an outline of its mechanism must be given.

Fear is alertness to the presence of danger. In other words, the reception of impulses making us aware of the actual or possible presence of phenomena associated in our minds with pain or injury. Such impulses may arrive within our consciousness through the special senses ; we may see danger, or hear sounds which we associate with danger ; the sense of smell may warn us, or the lightest touch upon the surface of our bodies ; or a taste within the mouth may make us conscious of the presence of harmful substances. These are probably the most primitive tracts through which fear-causing impulses reach the integrating centres of the brain, But we are also capable of imagination. In the absence of reality, stimuli which activate the fear-producing mechanism may arise from hypothetical causes formed within the mind. In civilised life the majority of those who suffer from fear or anxiety states are not threatened by reality of danger, but by the elaboration of possibilities which, being exaggerated by mental processes, produce a condition of tense alertness to the presence of danger, when in reality no such danger exists. That, unfortunately, does not prevent the physical manifestations of this emotional state. Cannon and others believe that the neural arrangements which are the ultimate receptors and integrators of emotional expression are situated in the optic thalamus.

This is particularly interesting when studying childbirth, for, as we have already pointed out, this is that part of the brain which is responsible for the integration of visceral pain stimuli.

Thus, we have the two great protective mechanisms, pain and fear, with a common centre—the optic thalamus, for the perception of sensory stimuli and the discharge of motor impulses. But, as

Crile has pointed out, " the phylogenetic origin of fear is injury ; hence, injury and fear cause the same phenomena." Fear gives rise to action ; in other words, produces motor responses. In order to do this, the sympathetic nervous system is activated by impulses directly from the optic thalamus. These impulses are therefore inhibitory to all visceral action, for, in order to utilise all possible physical strength for the purpose of defence, those parts of the body which are of no service in defensive action are deprived of motor activity. At the same time, the adrenalin excretion is increased.

In short, the influence of fear, being conveyed through the sympathetic nervous system, inhibits the pelvic autonomic. As a result of this, the neuro-muscular harmony of labour in the presence of fear is disturbed in a manner exactly similar to that produced by pain. The circular fibres contract under the influence of fear ; resistance in the lower uterine segment and cervix is produced, and although the pelvic autonomic may cease to influence labour, the inherent ability of the longitudinal fibres to continue their expulsive efforts increases the tension and causes stimulation of the nociceptors within the uterine musculature.

Again, we see the primitive function of labour demonstrating the phylogenetic law—injury and fear causing the same obstructive phenomena. And here, as in all cases, where there is injury or pain, action is demanded by its protective motor responses ; and where there is fear, fight or flight is its only sublimation. But in labour, neither fight nor flight is possible. We are therefore faced with a condition that produces exaggerated emotional states. In turn, this increased fear gives rise to the exaggerated demand for flight, but in labour there is no flight. Injury without action rapidly exhausts the nervous energy, but an acute emotional state that must be suffered without escape has been shown to exhaust even more rapidly the cytoplasm of the Purkinje cells of the cerebellum (Crile).

This direct result of fear has an important bearing on pregnancy and parturition. Its influence upon the endocrine system as well as upon the digestive, circulatory and excretory mechanism must be closely borne in mind, for I am of opinion that the large majority of the pathological states associated with pregnancy and parturition are directly dependent for their ultimate causes upon the integrity of the thalamic processes.

We must now turn more definitely to childbirth and investigate the possible causes and probable intensity of fear-producing factors prevalent in modern society. It is upon careful consideration of the theories of neuro-muscular harmony in all its phases that have been outlined in the previous pages that the practice of what has come

to be called " natural childbirth " has been evolved. If there is any truth in these suppositions the maintenance of the integrity of the thalamic processes should almost entirely eliminate pain from labour ; there should be a diminution in the discharge of nervous energy, and those accidents and complications which arise from both tension and fatigue of the expulsive apparatus should be conspicuous by their absence. Whether or not any part of the results of the application of this theory to practical work justifies further attention is entirely for those who read of it to judge.

There is a great difference between elimination of fear at its source and the escape from fear into unconsciousness.

CHAPTER VII

FEAR IN RELATION TO MENTAL IMAGERY

SIR FRANCIS GALTON wrote much that has been overlooked in the modern teaching of medicine. In 1883 ("Enquiries into Human Faculty") he discusses the importance of mental imagery. His investigation emphasises the vividness with which images, based upon thought and association, can be reproduced in the mind.

In 1910 I spent considerable time in collecting varieties of colour associations and the visual patterns of numerals. This was especially interesting to me, as I have (among other peculiarities) a certain form of colour blindness. Later I persuaded some of my musical friends to record the forms and colours connected with sound. We found that with practice definite types of colour pattern were consistently associated with the characteristic works of different musicians—Beethoven's defiant independence; Mendelssohn's pure refinement; the aggressive genius of Wagner and the spontaneous optimism of Mozart, all found expression in visualisation. Here, in works, we discovered the mind of the creative genius not only conveyed to us by sensuous auditory paths, but imprinted on our memories as clear and unmistakable pictures which, when reproduced in mental imagery behind closed eyes, woke up again the patterns, airs and harmonies that they represented. Dvořák has painted the simple pathos of the negro slave; Tschaikovsky has unveiled the panorama of tragedy and woe; Handel has opened our eyes to a great celestial choir massed upon white cumuli beneath the azure dome of heaven, flinging its song of praise across the amphitheatre of illimitable space. Thus, we find sights and sounds and associations, real and imaginary, imprint themselves upon the human mind to mould and influence its reactions to experience.

Is it unreasonable that we should pause to consider the mental imagery of labour as found within the mind of woman? Is it not essential that we should create by education and instruction the true and natural happiness of motherhood within the vision of her mind? The mental picture of her anticipated experience should be the image of all that is beautiful in the fulfilment of love. In peacefulness of mind and body she should patiently await the child whose greeting cry imprints such joy that for all time she can return to that sweet music and live again the crowning moment of her life.

A woman who had feared, because of all the accepted causes, the arrival of her child, had a natural and happy birth. Towards the end of the labour that produced her second child, she worked with tireless energy. " How many more ? " she asked me excitedly, as she rested between the contractions. " It will soon be here," I replied, " Why do you ask so anxiously ? I hope you are not too weary." " No, no, not that ; but this brings back to me so clearly John's arrival ; I can hear his cry and see his fat pink body in my hands. I'm longing for that heavenly feeling again ; I simply can't describe it to you. It won't be long now, will it ? "

Could we wish to blot out the mental imagery of her first experience ? It was a physiological device to prompt repeated reproduction. But how often we have to meet at that important moment in labour the defensive reactions arising not only from fear and doubt but from an imagery of semi-conscious torture justifiably reproduced to urge escape from the reality of repeated horror. Surely we cannot continue to overlook the importance of these natural phenomena when preparing women for pregnancy and parturition.

If, by association, imagination or lack of education, the first labour has been marred by the devastating influence of pain-producing fear, the mental image of that experience becomes the pattern of parturition in a woman's mind, and preordains her misery in repeated childbirth.

CHAPTER VIII

FEAR AND CONDITIONED REFLEX

FEAR of parturition has become the great disturber of the neuro-muscular harmony of labour. It is the fear of innumerable causes, as shown elsewhere. By association with labour, the instinctive desire for motherhood has been submerged in the restless ocean of pain and danger. As Pavlov (1927) points out, the things that give the greatest pleasure will become conditioned causes of acute fear and hatred if continually offered with a terrifying accompaniment.

When I was a small boy, I delighted in hearing my sister play "The March of the Gladiators." Many evenings before my bedtime she would sit at the piano and play it to me, until "old Ellen" came to take me up to bed. One night I sat by her, listening and supremely happy, when three revolver shots rang out from the woods at the bottom of the drive. Then I heard that "old Ellen" had been shot dead by the soldier she had been going to marry.

To-day, some forty years later, one phrase in that tune, if ever I am forced to hear it, brings back to me the chill of horror, the agony of fear and the inconsolable anguish that I suffered that night. "The March of the Gladiators," by association, ceased to bring me pleasure, but was a conditioned stimulus for violent emotional disturbance. So much so that ten years later when I was up at Cambridge, it floated across New Court to my room during lunch. I suddenly felt sick and had to leave the table, only realising afterwards that it was a reaction to an almost forgotten emotional state.

I know single women who shudder when childbirth is mentioned. Their natural longing for a child is obliterated from their minds. Associations of pain and mental imageries of agony and death have become conditioned stimuli for such fear and abhorrence that they seek permanent refuge in virginity and spinsterhood.

Women who have had one baby have been known to refuse all marital relations for ever after for fear lest they should have to experience labour again. Even the love of their child cannot override the fear and pain that its arrival occasioned. The child itself becomes a part of the agony that was endured. I remonstrated with a mother who refused to have anything to do with her small son; he had been brought up and cared for entirely by a nurse.

She only saw him when it was impossible to avoid him. Her whole life was ruined by the cruelty of her treatment at his birth. " I still dream of those three dreadful days ; I never see or hear him without living some part of that awful agony again." She could not listen to a conversation about babies, and instead of realising how callously her labour had been conducted, she was unable to escape the feeling of resentment to her husband and her son for being primarily concerned in her terrifying experience.

Both objective and subjective association can condition stimuli for fear reactions provoked by labour. What devastation to homes, husbands and children one ill-conducted labour can bring.

First labours are usually longer and entail more hard work than subsequent ones. The birth canal is opened up for the first time, but it is the experiences of the first labour which frequently make the pattern of those to follow. This is not invariably the case, but it is more usual for the reason that a woman has just cause to assume that she will have to go through a similar series of events for each of her children. She has a definite reason to be afraid of childbirth.

No one who reads the case referred to above can fail to form a mental picture of the tortures of mind and body that that woman must have gone through ; the almost complete breakdown of the machinery responsible for her nervous energy. The shock of such an experience was so profound that she sustained permanent impairment of function of her sensory cortex. Crile has shown experimentally that the Purkinje cells of the cerebellum become hypochromatic as a result of such experience, and has been led to believe by further experiments that these cells are beyond the power of recuperation (" Origin and Nature of the Emotions "). We cannot over-estimate the seriousness of such disasters as these.

Owing to the nature of Pavlov's experiments, the conditioned reflexes are often associated with salivating dogs, meat and gongs. But in clinical work the recurrent stimulus frequently arises within the mind. The memory, or even the visualisation, of an incident may surround a natural and physiological function with an aura of pain or pleasure so vivid that normal reflexes are disturbed. Just as a coloured light will produce the defence reactions of pain in a dog who has been hurt when the light appears, so will the word " baby " or " childbirth," " labour " or even " motherhood," produce emotional states and their physical manifestations in women who suffered the pangs of parturition. The months or even years following the event have witnessed the repetition of drama and tragedy, vividly recorded upon the receptive mind of a woman in labour. Every act that leads, in a normal sequence of events, to the association of painful childbirth will become inhibited by the

primitive instinct of escape. The chill of fear creeps into the warmth of love ; the kiss becomes a mere peck and an established routine ; the passion that was possessive and overpowering no longer binds life partners in the masonry of marriage. Coitus becomes an unjustifiable risk ; its pleasures fade and disappear before the ever-present fear of impregnation. And so the seeds of domestic strain and misery are often sown by painful childbirth, but fortunately the converse also applies. Some of those women, who later in this book record the happiness of their child's arrival, have never known the fulness of love until possessed with the irresistible desire to have more children. Again and again they recall and dream that transcendental joy that shines like a persistent orb of light, illuminating the wonders of their new life of motherhood. Every act of love is enhanced ; the physical and mental desire for the fulness of their husbands' affection perfects the mutual delight of their companionship. Restraint is flung to the four winds of heaven. As one they join together in the search for new and yet more delightful experience. Their coitus is a spiritual union blessed with profoundly pleasurable physical reaction. And when again the healthy, happy months of pregnancy are ended by the earliest contractions of labour, the natural mechanism of parturition is unhampered by fears and inhibitions. These women know no pain ; they wait impatiently for the first stage to be completed. In the second stage they work with a will that brings reward. Their memories of the joy of hearing their baby's first cry become again reality. The reflex phenomena of labour have been conditioned by the recurrent thrill of unbelievable happiness. If for a time it has ever known decay, it now becomes reinforced by repetition. On such foundations homes are made, and the structure of such castles stands immutable before the buffettings of fate or fortune that every family must know with the passing of the years.

CHAPTER IX

THE FEAR OF CHILDBIRTH

Quite apart from the natural causes of anxiety and doubt in the ordinary human being, a woman about to have a baby is subjected to fear-producing factors peculiar to the state of pregnancy and childbirth.

Professor Langdon Brown said that he believed no patient ever entered his consulting-room except in a state of fear. Professor Ryle says that he has every reason to believe that no patient ever asked the opinion of a medical man without anxiety. It is not unnatural, therefore, to presume that very few, if any, women can set out upon this great adventure without having at least some anxiety as to its outcome. Let us therefore consider some of the influences which are responsible for the mental attitude that the average woman adopts towards childbirth.

Any of us about to undertake a new and important adventure would naturally weigh up the odds for and against success. In order to do this, careful consideration would be made of the experiences of other people who have embarked upon similar voyages into the unknown. First, we would wish to hear the opinions of those about us, particularly people whom we respected and whom we believed had no reason to exaggerate the facts or mislead us in any way by the expression of their ideas. Secondly, we would be particularly interested in the history of similar adventures as related by those who had actually passed through them. We should probably gain great confidence or entertain severe misgivings from the stories that they told us. We must include the influence of the husband in this group, for he has formed his opinions upon hearsay and exerts strong personal persuasion upon his wife both directly and indirectly. Thirdly, we should be unable to refrain from paying considerable attention to the public opinion concerning our proposed adventure. Fourthly, in corroboration of this recently collected evidence, records handed down from writers and historians from the past, particularly if those records were hundreds and may be thousands of years old, would appeal to us as of considerable importance. And finally, we should take careful notice of the activities of the experts about us as they prepared for our care and for the success of our adventure. There may be other influences, but these five sources are probably the most important.

Now, how does this apply to the girl who is about to have her first baby? First, the past experiences of women of mature years who have been associated either socially, environmentally or professionally with childbirth are an extremely important source of influence upon which the psychological attitude of a young mother is formulated. We must accept the fact that practically all women speak of this natural function with bated breath, an air of mystery and an insinuation of its horrors. A few, more kindly disposed, may essay a word of sympathy by suggesting that after all most women seem to come through it all right.

From a very early age, however, girls become aware of the accepted teaching that to have a baby is a dangerous and extremely painful procedure. This was brought home very closely to me when one of my own daughters, at the age of seventeen, made these remarks in her weekly news reel to me :

" Jenny's mother is going to have another baby ; she is terribly upset about it and awfully worried because her mother told her it was absolute hell. Isn't it too frightful for her? " It was near the end of term, so I did not reply in any controversial manner, neither did I waste any time at the beginning of the holidays in introducing my daughter to the opinions of those who not only entirely disagreed with Jenny's mother, but who would like to have told her of the infinite harm this effort to gain the sympathy of her daughter had done, not only to her child but to her children's children. To my own child this was an example of the hearsay which sooner or later all girls became familiar with, even in those schools where it is not a frequent subject of conversation among the girls themselves.

And secondly, we must realise what young women hear directly and first-hand from their friends, relations and others who have borne children. It is a very strange thing that a high percentage of women delight in recalling the horrors of their own experiences ; they do not hesitate to exaggerate the modesty of their story by such phrases as, " Of course, finally they had to take it away." Or, " I was fortunate in having such a very clever doctor." Or, even more frequently, " My doctor said I was one of the worst cases he had ever attended."

I myself heard a woman of very considerable influence in London society, who was a grandmother, state, " After each of my children I vowed I'd never go through that again, but then, my dear, you know what it is——" This was to her daughter-in-law whom I was about to attend, and was said with the strange idea of giving her courage. Wherever women are gathered together and the subject of childbirth arises, the general trend of the remarks is that childbirth is a martyrdom which, though probably best forgotten, is

satisfactorily recalled with obvious pride. I am not infrequently amused myself by the abhorrence with which women relate the story of the arrival of their first-born, having prefaced their remarks by telling me that fortunately they knew practically nothing about it.

A man wrote to me, " My poor wife was really very brave. I am glad to say that as soon as the pains started she was given a large dose of morphia. Our daughter had to be helped into this world with instruments. When I went in to see her about an hour afterwards, my wife was just coming out of chloroform." I have since understood that these two people do not intend to have any more children because of the agony it entails. I had previously understood that that child was not intended. I have no doubt, however, that this is the sort of case which will spread fear to large numbers of sympathetic young friends, and which will materially increase the sale of contraceptives in at least one small section of London society.

Unfortunately, mothers, sisters and husbands are among the worst offenders. Have we not all known the mothers who have been brought near to nervous breakdowns by the anticipation of their daughters' ordeal. I can never forget a stern, county matron, not only the mother, but the tyrannical empress of a family of eight, who exercised her sway over half a county from the baronial mansion of her patient husband's ancestors. She led into my consulting-room, literally by the hand, a fat, red-faced girl of twenty-four, placed her in the chair by my desk, drew herself up to about five feet ten, pulled down her Norfolk jacket with a jerk, shook her neck a little further out of a stiff collar, and without greeting me opened the conversation in a low, dramatic voice :

" I have brought my daughter to you ; I am afraid she has conceived."

I took a hurried glance at the girl's left hand, and was relieved to see that she wore a wedding ring. She then went on to explain that she had told her daughter all about it, and that she hoped, when her time came, she would conduct herself with that courage which was in keeping with the family tradition, that she would not flinch in the face of danger nor cringe before the necessity of pain. I did not inquire what she had told her daughter ; it was with the greatest possible difficulty that I could bring myself to undertake to look after her at all. In their country home some two months later, the girl had a miscarriage. Two years afterwards I heard that she was being treated for acute alcoholism. I have since heard that she is divorced from her husband.

Can any of us doubt that the agony of fear through which this

girl was led was at the root of all her trouble? Can we imagine what her four sisters went through when they had their children? It may be that it is an exaggerated case, but is it any worse than many others?

On one occasion I had spent three hours with a girl, and just at the beginning of the second stage of labour had been able to assure her that she was past the worst. She had learnt how to conduct herself and her labour and everything was going extremely well when her mother tiptoed into the room. She wore an agonised expression on her face; she went to the other side of the bed and took her daughter's hand, stood whilst she had the next contraction, and then with tears rolling down her cheeks whispered, "Darling, if only I could bear some of your agony for you." Fortunately, by that time, my patient had transferred her confidence to me, because she smiled at her mother and said, "Yes, it must be painful for you to watch. Now please go." I regret to say that I added, "Yes; please go."

Husbands are sometimes extremely sensible and understanding people, but a large number are a serious menace. That a man should be anxious whilst his wife is in labour is only right and quite reasonable. I was found reading the daily paper apparently calmly when my first child arrived, except that the paper was upside down. This, I regret to say, was true, for every obstetric abnormality that I had ever seen was to my knowledge occurring upstairs. But a state of anxiety is infectious, and on three occasions I have had husbands work themselves up into such a frenzy of anxiety that they have telephoned for other doctors to come and assist in the last stages of the confinement. That anxiety spreads, and is unquestionably felt by the wife, even in the most normal labours, and not infrequently increases the difficulty of keeping control over the patient and thereby assisting her to maintain control over herself.

Both during pregnancy and labour the influence of the husband is important. Most men know nothing about childbirth, except that it is something which they have been led to understand is frightful. It is quite natural that many of them should fear for their wife's safety and sincerely sympathise with her in what they believe to be her "ordeal." Are we not frequently told by women how worried the husband is about the arrival of their child? Few and far between are those who urge their wives to realise that childbirth is a natural function and that there is nothing to be afraid of.

This state of anxiety from which the large majority of husbands suffer is so frequently met with that there was, perhaps, more than humour in the remark made by the doctor to an anxious husband quoted in *Punch*, to the effect that he had seen many hundreds of

babies into the world but that he had "never lost a husband yet"!

Such anxiety in a home during pregnancy and labour cannot fail to be communicated in some form or other to the woman about whom it is centred.

Similarly, we have to recognise that very few daughters learn much that is likely to be helpful from their mothers. The days of large families have passed. We still meet those happy girls who are members of families of from ten to sixteen children; in most cases they have the easiest labours. Only recently a girl who was tenth in a family of fifteen gave birth to an 8-lb. child in the ward with women who had had their babies. She herself was eighteen years old. There were so few signs of labour that she only persuaded the nurse with difficulty that her baby was about to arrive. She explained afterwards that her mother had had fifteen without any trouble, that she had been brought up to believe there was nothing in it and certainly nothing whatever to be afraid of. "What mother can do fifteen times and be as well as she is, I can do." And that was her attitude towards labour. That, we will agree, is a very rare occurrence to-day. It is more usual for mothers to refrain from discussing the subject with their daughters; there is a tendency for women to consider that their daughters up to the age of twenty-two or three are still children; their virgin simplicity is assiduously guarded against the horrors of truth. The facts of childbirth are withheld because the experiences of the mother have been such that she has no wish to communicate them to the child whom she believes to be about to suffer. If, in a moment of confidence, any information is given, it is more likely to be fear-producing than a stimulus to courage.

Only too frequently, however, married women come into my consulting-room entirely ignorant of the most elementary facts concerning childbirth, and ask me to tell them about it, since it is a subject they could not dream of mentioning to their own mother. Unfortunately, we still have to accept the fact that the influence of mothers upon their daughters, either through the subtlety of their information or through the mystery of their silence, is a serious factor amongst the fear-producing elements in childbirth.

We must remember, also, the friends of those who are about to have a baby. If, in a party of women, one were to state boldly that she had enjoyed every moment of her pregnancy and that the happiness of her labour was quite indescribable, most of those in the room—if they had had children—would either think that she were mad or that she was being funny or that she was not speaking the truth. So firmly rooted throughout society is the belief that

childbirth is a painful and a frightful affair that even those who can state quite honestly, from their own personal experience, that it is not so, are disbelieved and even laughed at. Several of my patients have told me that they would like to spread the gospel of natural childbirth, but that, having given their opinions once or twice, they recoil from the criticisms and incredulous jeers of their friends.

It must not be overlooked that those who have suffered are justified in believing in suffering ; neither must it be forgotten that the weight of opinion in this matter is entirely on the side of those who accept the agony of labour as a natural and essential ordeal through which a mother must pass. There is no blame to be laid upon those who are honest in their opinions, and neither is it their fault that they have suffered. That does not, however, mitigate in any way the crime of their propaganda, for to produce alarm can never assist in the accomplishment of a task, however unimportant.

Mothers, husbands and friends must therefore be recognised as agencies for the production of fear in the minds of the vast majority of young married women.

Thirdly, apart from the more intimate sources of information about childbirth, women cannot escape the influence of the general trend of public and popular opinion. They read books, study papers, listen to the broadcasts on the wireless, and see pictures at the cinema. These things comprise the modern foundations of both education and amusement. In and from all of them the same atmosphere is found—that childbirth is an ordeal, that it is essentially painful and dangerous to the life of the mother.

If the novelist of to-day finds it necessary to increase the interest of the story he is writing by describing the events which occurred when one of the chief characters of the book gave birth to a child, the incident is fraught with poignancy and tension, drama, suffering and possibly death. Such students of human nature well know that nothing is more likely to gain the attention of the reader ; therefore, words are not minced, and scenes are described with the maximum of detail that is likely to pass the censor. Do we often—or, in fact, have we ever—read of a normal character experiencing any happiness in childbirth ? I think few of us are able to remember a maternity case described in fiction in such a manner that we could assume anything other than that horrors attend this natural function.

A woman of twenty who had just had her first baby wrote to me after she had had a perfectly natural parturition recalling all the influences of which she was conscious which had surrounded with mystery and apprehension the arrival of a baby. Going back to her later school days, she wrote : " In the holidays, in casual reading,

one occasionally encountered mystifying and terrifying descriptions of women in labour which left a lasting impression. For example, 'Honourable Estate' (Vera Brittain); 'Mother India' (Kathleen Mayo); and Ernest Hemingway's 'Farewell to Arms.'"

I have not read any of these books myself and cannot therefore say whether she was justified in any of her deductions, but probably everyone who reads novels has from time to time been impressed by the drama of childbirth. If, for the sake of information, scientific or partly scientific books have been perused by women who are about to, or hope to be about to, have children, there is very little comfort to be found there. Pain is the first essential; all our great obstetric writers preface the chapters on labour by some remark which conveys the fundamental truth that labour is recognised by its pain. It would serve no purpose to mention the individual authors who subscribe to this teaching, for there is no exception. There are very few chapters written upon normal labour which do not assume from beginning to end that the contractions of the uterus give rise to severe physical pain. The whole act is described from the point of view of its mechanism; the impression we get is that the woman concerned, for the time being, becomes a machine, without either consciousness or volition; things happen in the reproductory mechanism; stages follow one upon another; the child is expressed from the uterus by a series of agonising contortions which cause it to rotate, extend, and advance, according to plan. We never read of the thoughts of the woman during these hours of what is described as "labour." We are never told whether the mother is likely to have any views, or whether the attendant obstetrician has any duties to perform at the upper end of the body as well as the lower. The consideration that the average student is taught to give to the woman herself is exemplified in "Midwifery," by Ten Teachers, published in 1920 (2nd Edition). Little has been added in the text books of the last twenty years to that humane advice in the chapter on the "Management of Labour":

"If everything *is* found to be normal, the patient should be told that all is going well. She is usually much relieved when she hears that all is *straightforward.*"

Those observations are, of course, correct; the italics are mine. I have felt many times when I have read similar remarks that an addition should be made in brackets after the word "normal"—"which is extremely unlikely." It would be more in keeping with the depth of encouragement that such a generous communication holds. But still, we must admit that even a dry crust of bread is better than nothing to a starving woman.

So from books we are likely to gather very little that will encourage a girl to seek motherhood cheerfully. It is not exaggeration to say that "motherhood," maternity, childbirth and even birth of a child have become words which many women consider to be unpleasant. Not infrequently has it been heard, "I do so dislike the term 'motherhood.'" Or, "Maternity is a dreadful word." On several occasions after lectures women have bravely risen in the audience to ask whether they could not be called something other than midwives, because to the lay mind it seemed to convey an unpleasant atmosphere. It was suggested at one large centre that the term "obstetric nurse" should be used.

These may have been the criticisms of over-sensitive women, but there is something in it, and I am inclined to attribute the apparent dislike for these terms to the associations which they stir in the mind of the average woman who hears them. There would be different replies if a series of women were asked which they would prefer to hear when being announced at a large public reception: "Miss A, the world-famous film star (and her fourth husband)," or "Miss B, the well-known midwife (alone)." Perhaps a little imagination is needed to visualise the expressions upon the faces of those who turned to look; a little more imagination may be needed to answer the question—Why? I suggest the answer is association, and that association is largely gleaned from such influences as books and writings.

We cannot blame the daily papers for seeking good copy; they are printed in order to be read. The story of a straightforward birth is not news, unless it occurred in a taxicab or a telephone kiosk. But the story of a mother's death when a child is born is almost worthy of headlines. The meeting of a learned society is rarely front page news, unless it is discussion or report upon maternal mortality. The publication during the last few years of the records of maternal mortality, of its seriousness as a threat to national stability, and the acute interest that has been afforded it by the leaders of both the scientific and the social life of our country, has exaggerated its incidence in the mind of every woman who is not familiar with the details of the subject. The reasons why those two or three per thousand women die are rarely stated. The causes of the abnormality or the responsibility of the organisation which, by its imperfections, indirectly allows of inadequate attention, are never mentioned. One great factor has been overlooked, and that is the harm done by these publications. It is out of all proportion to the benefit obtained by their readers. The thousandth chance is a very definite one; millions will take a ticket in a sweepstake where their chances are much less than a thousand to one, but until the prizes

are drawn they will continue to believe that fortune will favour them. How many women, therefore, who hear that a certain number in a thousand die in childbirth, can overlook the fact that they are likely to be one of the certain number, however small. It has been said to me : " Women do die in labour ; can you promise me that I shall come through safely ? " I have heard recently that it is proposed to exhibit a film of a woman having a baby ; it is said to be for educational purposes. I sincerely hope that such a picture will only be shown to those qualified to attend upon women in labour, unless it depicts a natural function, not only attended by simplicity of parturition, but exhibiting evidence of those emotional factors which will encourage young women to disbelieve in its horrors and to become aware of its joys.

And so we find again that there is very little, if anything, that is to be read in the daily papers, the weekly magazines, and the monthly journals that is likely to remove anxiety from the minds of girls about to have children.

In the life of to-day, cinemas have considerable influence upon the minds of the people. From time to time pictures are shown which, after the manner of some novels, make a great point of the drama of childbirth. The silent fortitude of an agonised woman is insinuated, if not actually shown, and the bleat of a new-born baby is heard from behind a screen. The tense anxiety of the husband is not overlooked by the author, and the young man may be seen walking up and down the room wringing his hands ; perhaps drinking innumerable whiskies and sodas, looking imploringly towards a closed door or dashing hysterically at a bearded doctor. The company in waiting registers (I think it is called) a series of " expect-the-worst " expressions. Such films as " The Good Earth," " Goodbye, Mr. Chips," and " The Citadel " demonstrate this play upon the emotions, although happily in some it is so exaggerated as to become laughable.

But the same general trend of thought about childbirth is found here as in other places. There seems to be a demand by those who produce such pictures to publish to the world the sufferings of women in labour. No girl who is pregnant can see these representations without becoming acutely conscious of the possibilities that may attend her own confinement.

We must also record that certain broadcasts have, in my opinion, done definite harm. One in particular I shall never forget.

Not very long after I had been to Brighton to lecture upon natural childbirth, this broadcast was made on behalf of the very hospital whose nurses had comprised part of my audience. The excellence of the work done in that district was not only shown by the statistics

given by the medical officer of health, but also by senior officials whose enthusiasm for the progress of the work was unstintingly displayed. Dr. Cronin, the author of " The Citadel," was chosen as a fitting person to make an appeal for funds ; an apt choice, for a medical man who had suddenly become famous for writing a book on that aspect of his profession with which he was most familiar, was likely to attract the attention of his listeners. I, too, listened, but before many sentences I rose from my chair unwilling to believe my ears. Agony, suffering and death seemed to be the natural outcome of pregnancy in Sussex because of the frugal provision made for the unhappy mothers. I was told afterwards that it was a very successful appeal from the financial point of view, but I wonder if it would have been called a success had I published the questions that my patients asked me about it, or the letters that were written me concerning it, or the terror that filled the minds of some of those who had heard it. It was a classical example of fear-producing propaganda. I have no doubt that the author was absolutely sincere, and that he conscientiously contributed to the fund-raising campaign that which he believed to be a great service. We cannot criticise an author if his books and speeches inadvertently focus the attention of his public upon the sordid aspects of the subject with which he is dealing, neither can we condemn one who draws conclusions from his own experiences. Many medical men have become novelists ; we expect their books to reflect the environmental influences of that part of professional life with which they are most familiar. The public welcomes an iconoclast with open arms, and a creator with open mouths.

On reflection, I decided to write to Dr. Cronin, for I was persuaded that above all personal motives his desire was to render the fullest possible service to women about to have children, particularly in Sussex. So I pointed out to him that a great effort was being made to eliminate the fear of childbirth ; that I believed we shared similar " ambitions for the improvement of medical science and its application." I asked him if he would give me permission to quote certain parts of his appeal, as I considered it an excellent example of fear-producing propaganda. On the other hand, " I would not like to publish anything (that he had said in the broadcast) without your knowledge. . . . I have been too frequently misquoted myself." Here, I felt, was a great opportunity for a famous man who is also a doctor to be of further service to the women of our time. I received due thanks for my letter—" but I am afraid it is impossible for me, under the circumstances, to allow you to quote any part of the Appeal which I made for the Sussex Maternity Hospital." *Mea virtute me involvo !*

And so it is that both in words and pictures those who have direct access to the emotions of the public make profit for themselves or their cause in fear-producing presentations. Pain, illness and death ring tears and pennies from the people ; falsehood and fear are dangled before their eyes ; their hearts are expanded by benevolence. It does not matter how many women are terrified, and who cares so long as it attracts the necessary attention and money rolls in. If childbirth were represented as easy and pleasing, it would not be good copy. There must be drama for publicity, tragedy for donations. Play on the tender spots in women's minds ; it pays in the long run. Young women and girls who see and hear these things cannot face the facts of labour without fear ; they have heard no comfort and seen no joy in childbirth, either from the moving pictures or from the appealing broadcast. What a wonderful opportunity these vast organisations are missing by withholding the truth of natural childbirth from those who are ready and waiting to accept it.

Fourthly, there are many historical writings from which the reader will be led to conclude that labour has always been painful. The most important of these writings are those which are most likely to have been widely read by women. A very large percentage of women, in my opinion, particularly during pregnancy and childbirth, have a strong religious background to their lives. Sometime or other they have become familiar with certain parts of the Bible, even if only during their schooldays. Unfortunately, neither the Old nor the New Testament provides any cause for comfort, but rather gives them good reason to be afraid of childbirth. Genesis iii. 16, quotes the Lord God as having said to Eve, " I will greatly multiply thy sorrow and thy conception ; in sorrow thou shalt bring forth children." This passage has been known as the " Curse of Eve " and the authority of the translators in the time of James I has not been questioned. There are many other passages which convey the same impression : misery, pain and sorrow :

Galatians iv. 27. " Rejoice thou barren that bearest not ; break forth and cry thou that travailest not."

Isaiah lxvi. 7. " Before she travailed, she brought forth ; before her pain came she was delivered of a man child."

Isaiah xlii. 14. " Now will I cry like a travailing woman."

Isaiah xiii. 8. " They shall be in pain as a woman that travaileth."

Isaiah xxi. 3. " Therefore are my loins filled with pain ; pangs have taken hold of me as the pangs of a woman that travaileth. I was bowed down at the hearing of it ; I was dismayed at the seeing of it, and my heart panted ; fearfulness affrighted me."

Revelations xii. 2. " And there appeared a great wonder in the heaven ; a woman clothed with the sun and the moon under her feet and upon her

head a crown of twelve stars. And she being with child cried, travailing in birth, and pained to be delivered."

Hosea xiii. 13. "The sorrows of a travailing woman shall come upon him."

And in other places in the Bible the same picture of pain, frightfulness and grief illustrate the accepted opinions of childbirth during those thousands of years represented by the historical writings.

It is reasonable, therefore, for any woman who has carefully studied her Bible and who has been brought up to accept its inferences, if not its analogies, as being true, to be persuaded only with difficulty that childbirth is not intended to be painful. She reads of its sorrows; we teach of its joys. She reads of its pain; we teach that pain is unnecessary. Our evidence must indeed be strong before we can expect to be believed.

But that is not all, for she has the support of the Prayer Book, which is still accepted by the Church, and from which the thanksgiving of women after childbirth is read unabridged and unaltered. "Forasmuch as it hath pleased Almighty God of His goodness to give you safe deliverance, and hath preserved you in the great danger of childbirth; you shall therefore give hearty thanks unto God and say . . ." "The snares of death compassed me round about; and the pains of hell gat hold upon me. I found trouble and heaviness, and I called upon the name of the Lord: . . . I was in misery and He helped me. . . . Thou hast delivered my soul from death."

Although the Dilexi quoniam has several different translations, I have taken those passages from the prayer book of my grandmother, to whom this service was read many times. And finally, this thanksgiving finishes: "Oh, Almighty God, we give Thee humble thanks for that thou hast vouchsafed to deliver this woman thy servant from the great pain and peril of childbirth."

Are we still to expect women to believe that childbirth can be painless, that it can be a moment of transcendental joy? I must repeat that the evidence will have to be very strong before we can hope to succeed. And yet how many mothers are willing to overlook the supreme happiness that the arrival of their baby has brought them. When discussing this service with a girl of twenty-three, she said, "But you would not expect the most wonderful gift of God to come unpleasantly?"

Is the pride of possession and accomplishment that fills the heart of every young mother when she first sees her baby unworthy of mention when giving thanks? This lame apology for gratitude in no way thanks the Almighty for the gift of a child. This practical

manifestation of the perfection of human love is not deemed worthy of mention when a woman kneels before the God of Love. The Church simply asks her to say, " Thank you very much for having allowed ME to come through all that frightfulness unscathed ; it is so nice to be alive in spite of having performed the greatest of all natural functions for which You specially built me, although You did make it dangerous and painful for me."

What a travesty of the true facts. It is not for the escape from pain and danger that women thank God ; in my experience mothers are not made like that. It is for their child. Women do not believe that the Lord of Nature prescribed suffering and the fear of death as the cost price of their biological purpose in life. I have reason to believe that there are influential dignitaries of our Church who favour the prayer that I have suggested to them, which has been formulated after discussions with many seriously minded women : " Forasmuch as it hath pleased Almighty God of his goodness to entrust to your care and keeping this child and to have raised you to the holy estate of motherhood, you shall give hearty thanks unto God and say . ." Then follows Psalm 127, *not* Psalm 116. If that sort of atmosphere could be created, one important cause of fear would be eliminated from childbirth. The Church would be able to teach its beauty and to encourage confidence in normal, natural function. The influence of this change would be world-wide ; childbirth would no longer be considered the great ordeal of womanhood. The shadow of injury and death would cease to mar its beauty, and motherhood, which is the most divine manifestation of God's love, would be exalted to its true position of importance in our national life.

But unfortunately, when we review the Bible and the teachings of the Church, we find nothing there that can give comfort or courage to girls who are about to become mothers. The morbid tocsin reverberates across the wastes of time : pain, sorrow, death.

And, finally, when a woman becomes pregnant for the first time, she usually seeks medical advice. According to her social position, she either attends the out-patient department of a hospital or ante-natal clinic, or visits a doctor. In some country districts, the local midwife takes complete charge from the beginning. This of itself is evidence of anxiety ; she wishes to know that all is well, and to be in contact with some person or organisation from whom she can get advice upon matters relating to the birth of her child. From these sources she will arrange for the presence of a midwife or a doctor at her confinement, or for a bed in a suitable hospital or maternity home.

We overlook, perhaps, the excitement which attends these

preliminary arrangements as frequently as we fail to discern the disappointment when such arrangements cannot be made according to plan. During pregnancy, the average girl needs considerable support; she requires explanation of unfamiliar occurrences. From these people, who in her eyes are the experts on childbirth, she learns. The nurse and the doctor and the antenatal clinic are responsible for her attitude towards childbirth.

It would be expected, therefore, that no woman whose antenatal history and condition are normal should have any anxieties about labour, or fears for herself or her child. It is obvious, however, that in spite of the close attention given to young mothers during their first pregnancy, fear is not eliminated.

We must examine this question from the point of view of the woman herself. Although there is no constant law, there are certain factors which the average girl thinks about. Some supply an adequate answer for themselves; others do not trouble to ask themselves or anyone else any questions. But we may perhaps inquire: What are some of the thoughts which predominate in the mind of a sensible girl who is pregnant for the first time? I suggest that most of them feel that they have embarked upon rather a dangerous adventure; they have the courage to see it through, of course, but cannot help thinking about it sometimes, and even wondering what will be the outcome.

Many of them consider that it is only right and proper that they should suffer certain discomforts. I find that very few women are willing to believe that sickness and nausea are not necessary in pregnancy, and some even consider it their duty to be sick either in the early morning or the late afternoon. There are vast numbers of women who have had large families who have felt neither sickness nor nausea during pregnancy, and yet it appears to be an accepted fact that if pregnant, there is sickness, and sometimes if there is sickness it is presumed to be pregnancy. This association was so fundamental to two people who came to see me, that the woman, who was about thirty years of age and very large, confided to me before her husband that although they had only been married a few weeks she was afraid that she had fallen because her husband had been sick every morning for ten days. This was most seriously stated, and with equal solemnity I had to point out that I thought it more likely to be the husband who had fallen. Morning sickness is one of the horrors of pregnancy to many women of all classes of society to-day. To women who are energetic, or who have to earn their own living, the limitations of their habitual activities cause considerable distress. Many resent giving up those occupations which had meant pleasure, exercise or livelihood. It is not yet

established as a teaching among women that all normal occupations which do not demand any grossly unnatural performance are in keeping with healthy pregnancy, and if a woman has to earn her living, she should be able to do so to within a few weeks of the birth of her child. Expectant mothers do not give up housekeeping in the homes of our working classes until their babies actually commence to be born.

When a girl is very young her appearance, shape and gait are matters of serious importance. She is rightly proud of her figure ; she demands to retain its beauty ; she dislikes the ungainly spectacle of women whom she has seen in the later months of pregnancy ; she fears swollen ankles, pigmented patches upon her face, white lines upon her abdomen and development of the breasts. Without attention to these matters, and explanation and care from one who shows obvious interest in her well-being, she may brood and become depressed until pregnancy itself is a menace to her most cherished possessions.

We have already pointed out that she will have good reason to believe that these discomforts will culminate in an agonising experience and danger to herself and her baby. Even if all goes as well as it is possible to expect, she has got to suffer pain, and however bravely she may discard this ominous threat, she will find it difficult to compare favourably the state of childbearing to the physical freedom and spiritual buoyancy that were her delight during the first few weeks of marriage.

Do doctors, nurses and antenatal clinics delve into the thoughts of women who appeal to them for help ? Do they realise the profoundly important influence of these most intimate considerations ? Experience teaches us that here and there an understanding midwife or a medical man prompted by human sympathy and insight will tactfully eliminate these causes of physical and mental disturbance. But the general teaching of experts is that antenatal care should be primarily scientific ; the anatomy and the physiology of the woman should be investigated ; the efficiency of machinery and metabolism should be determined, and at all costs an abnormality, or even a suspicion of abnormality, should be recorded. Few women are interested in their own antenatal investigation beyond receiving a positive reply to their request : Is everything all right ? That indeed is some comfort in their suffering—a small mitigation of their sentence.

They have their pelvis measured ; their blood pressure taken ; their abdomen is listened to and prodded ; the urine is examined from time to time ; if all is well, a few hints as to exercise and diet echo in their ears as they pass out of the building, wending their

way among those who anxiously await investigation. Perhaps one of their number exhibits an abnormality—there is a flutter in the dovecote ; contracted pelvis, albumen in the urine, a breech ? Whispers are heard—she is too small ; her kidneys are wrong ; the baby's upside down. The reality of danger is imprinted upon the minds of all who become conscious of its presence in a neighbour.

It is not suggested for a moment that all antenatal clinics are organised in such a manner that this can happen, for gradually an increasing number are paying attention to the minds of their women patients, and every care is taken to maintain a cheerful confidence in the natural outcome of pregnancy. There used to be two kinds of antenatal clinic—one which laid great stress upon the obstetric care of women, and the other which conducted obstetric examination but emphasised the art of mothercraft and personal health during pregnancy. Each was good in its way, but each lacked a feature which was essential. To-day, these two aspects are combined in the best schools, with the result that mind and body receive adequate attention.

It is perhaps those who are attended by a private doctor who, in many cases, meet with the greatest difficulty. A doctor's wife who came to me only a few days ago, six and a half months pregnant with her second child, astonished me by remarking, when I took her blood pressure, " I have never had that done before." Knowing that her first child had been seen into the world by an obstetrician of high repute, I suggested that perhaps my blood pressure instrument was different from those previously used, but she said, " I have never had my blood pressure taken before."

She complained of great lethargy and tiredness, and told me that he still had some nausea every day. I asked her if she had ever had any advice upon her diet. Her reply was, " No. I have been told to eat normally." I took a drop of blood from the lobe of her ear, and found that her hæmoglobin was under the 60 per cent. mark. I inquired if she had ever been given iron during her previous pregnancy, and she replied, " No. I do not think I was suspected of anæmia." She told me that at the time when either her third or fourth period was due after the first baby had started, she had considerable hæmorrhage. She was put into a nursing home for some weeks, and it was suggested that a placenta prævia was present. She felt very ill for the rest of her pregnancy and was not allowed to take any exercise or do any exercises. She was in labour eighteen hours before her medical attendant arrived, and told me that she suffered an agony of suspense, and was conscious now of having resisted by every means at her command the progress of labour, lest the child should arrive before the doctor. When he

arrived she was anæsthetised with chloroform on a mask, and recovered consciousness about three hours later. She does not know how her baby arrived. I asked her if instruments were used, and she said she had not been told.

Being suspicious, I inquired, " Were you torn at all ? " And I was amused to hear her say, " Oh, it was only a scratch." " Did you have any stitches ? " " Yes. My nurse told me that only three were necessary ; one inside and two outside."

That was the recent story of the wife of a specialist, cared for by specialists, with every advantage and opportunity that science and skill can offer, and what was her final request to me as she left after that consultation ? " I want a baby that I know to be my own. My child is very sweet, but I have never really felt that he is mine. Can you make this baby part of me after it is born ? " I could only reply that I would do my best.

Now, if that can happen to a woman who has the opportunity to receive the most highly perfected education and treatment during pregnancy and childbirth, what are we right in presuming of thousands of women who attend doctors who, although equally conscientious, are less well informed, less competent and less experienced in the arts and crafts of obstetrics ? Very few medical practitioners can offer their patients ideal obstetric care, and very few busy general practitioners conduct their antenatal work with the precision and critical thoroughness of our hospitals and antenatal clinics. There are not many who can afford time to discuss those questions which appear to them relatively unimportant, and there are many who practise obstetrics who are not obstetricians either in spirit or experience.

Ten years ago it would have been much easier for me to have described the fear-producing activities of a midwife. Since then, I have had the experience of lecturing to midwives in all parts of the country, of answering their questions and discussing with them the difficulties and problems which arise in their daily practice.

To-day, it is generally recognised by members of the Midwives Association and its subsidiary branches that one of the first principles of good midwifery is to protect a woman in labour from fear-producing words and actions. I believe it to be true that in certain sections of society women have more confidence in the midwives who attend them than in medical men or women. But there is still much to be done ; the midwife has to be present from the beginning; she has to bear the brunt of the emotional strains and stresses of the first stage of labour ; it is her province to explain what is going on ; to give confidence and maintain calm. In my opinion, the first stage of labour is not only the most important but the most difficult

to conduct efficiently. How many doctors have in their lives been with a girl from the beginning of her first labour to the end? It is during this time, when the mind of woman is more acutely sensitive to impression than ever before, that a superlative degree of tact and understanding is required. Such things as the preparation of the room, the laying down of dust sheets, or maybe newspapers; sterilising bowls; drums and innumerable dressings; antiseptics; lotions; methylated spirit, etc., make women wonder—Why? It is difficult to lie in bed, or even to be up and walking about, whilst you are subjected to an entirely new sensation in the early stages of what you believe to be a great event, and see preparations going on about you for later stages of that event, the details of which are still mysterious. Possibly one of the greatest sins a midwife can commit is to exhibit the over-efficient bustle of a woman who is determined to make her presence felt. It is a temptation to endeavour to gain the confidence of a patient by demonstrating the methodical perfection of preparation. It is also a great temptation to some nurses to establish their reputation by recounting previous experiences, or by describing the abnormalities it has been their privilege to witness. I only wish to draw attention to the possibility of selfish thoughtlessness. Unfortunately even to-day we hear of women who have been subjected to the most terrifying experiences; who have been intentionally told the most alarming things in order that they should be kept quiet.

It seems strange, as I examine my notes, peruse records, and think, that on the whole I believe it probably to be true that a much higher percentage of practising midwives appreciate the importance of fear in labour than is found amongst medical men. A Canadian member of the Midwives' Institute, who has been working for twenty years in one of the outposts of the Empire, over forty miles from either a telephone or a doctor, wrote home to her teacher, who is now one of the senior officials of the Midwives' Institute in London:

"We must avoid as far as possible any tendency to fear that the prospective mother may have. Fear is infectious, and we must guard against the malady ourselves, or it will be reflected in our patients."

Perhaps it is easier to be less affected by fear when the nearest medical man is forty miles away!

Let us consider what happens to a girl in a maternity home for her first baby. She probably has every care and attention from the purely obstetric point of view, but is it often remembered that nothing is more terrifying to her during her first labour than being left alone? These rooms where women in the early stages of labour

are taken "to get on with it" until they are ready to be moved into the labour ward, constitute a considerable source of trouble. Two, three, or even four women lie together, some quietly bearing the unexplained sensations; some suffering pain; some crying out in sheer terror with each contraction. From time to time a nurse comes in; there may be a word of encouragement; it may be that the clothes are just turned back so that nurse can "look." But there are few words of explanation, little or no instruction, and not infrequently they hear the moans of their neighbours or wild shrieks from the labour ward as the door swings open. To me there is nothing more horrifying than the state of mind of a sensitive girl who has to go through the isolation and desolation of those waiting hours. At length, with her spirit almost broken by the assaults of agonising doubts and fears, she is deemed ready for the final stages. If she is well enough, she puts on her dressing-gown and shoes and walks or staggers to the labour ward, stopping for a while to hang on to the nurse's arm whilst another contraction comes and goes. She then finds herself being led into such a room as she has never seen before. In spite of her condition, she notices in the twinkling of an eye her surroundings; the nurses, and perhaps the doctor, draped in long white gowns, white caps and masks; she sees only their eyes and is therefore unable to be comforted by kindly expressions on the faces of those about her. In a small annexe, or even in the room itself, are sterilisers and large, bright, metal drums. She does not fail to notice the glass-fronted cupboard in which hangs a large collection of instruments; she has heard of instruments, but had no idea that they looked like that. On a table by her bed are bowls, dressings and towels; at the head of the bed, or somewhere nearby, are stands with cylinders of gas.

Then she climbs upon a high bed, harder and more uncomfortable than any she has ever known; she probably feels the chill of the mackintosh sheet with only one thin covering over it. She lies in whatever position she is told.

I wonder if the average man can even imagine the thoughts that would go through his mind if he were subjected to a similar experience? Some, I know, would be unconcerned, particularly if they had been told what was going to happen to them But it must be remembered that a girl does not know what is going to happen to her, for "having a baby" means to a primipara what she has been told by others. That is usually poor comfort.

And so she lies upon her side or upon her back, awaiting the next move. Possibly she is informed that when the pain becomes unbearable she may have a whiff of chloroform or a breath of gas:

she is not told why, neither is she given the opportunity to discuss the question ; if she were, doctors would frequently hear something they would be unwilling to believe, for many women have stated frankly and openly that their cries were not in pain—they just could not help crying out ; that their demand to be put to sleep was not because of pain, but a means of escape from the terror of the unknown that possessed them. I hesitate to say how often women have demanded anæsthetic in my practice, not because they were in pain, but because they " felt it was about to hurt " ; not because of the pain they had, but because of the pain they believed must inevitably arrive.

We must to the best of our ability examine closely every moment of the experience of labour if we are to eliminate the pain-causing factors which are not only unnatural but unnecessary. I have discussed this aspect of labour with my friends who are in charge of obstetric units of large hospitals ; the more experienced are willing to admit that it is a weak point in their organisation, but their invariable comment is, " It's got to be like that. We have neither the time nor the skilled attendance available to give the personal and individual care that you suggest." Unfortunately, the construction and organisation of our most modern hospitals show that little provision has been made for the mental care of the patients whilst in labour.

Of the innumerable instances of the influence of such surroundings I will only quote one, but it is typical of many. She was a patient of mine in an extremely well run maternity hospital. She was the wife of an Army officer, aged about twenty, who had had her first baby naturally. She took an interest in what was going on, and assisted in the production of her baby without any desire or demand for anæsthesia. My visits to her had been a great joy to me, as she was what I consider to be an excellent example of the true happiness of motherhood ; the atmosphere of her room was entirely carefree and refreshing to all who went to see her. Her baby was a fortnight old when I paid the visit that depressed me. It was at my accustomed time that I opened the door of her room, expecting to see the sun shining in through her window, vases of flowers filling the room with colour and fragrance, her face wreathed in smiles of welcome, and to hear her cheerful greeting. I was surprised, therefore, to find the curtains drawn and the girl lying down, resting. When Sister let in the light, I saw my patient looking miserable and tired, and quite different from her usual, normal self. When I asked her what was the matter, she hesitated to tell me because, she explained, she was afraid I might think her rather silly. Sister, however, offered me an explanation : During the night a woman had had

her baby in the hospital, and she had made a frightful noise which started at about three o'clock in the morning and went on continuously until five-thirty. I was given to understand that someone was in charge of the case who was not familiar with the methods that are now practised there. It was the first time that this girl had ever heard the sort of noise that women make when they lose control and when they are not looked after properly when their babies are coming. I offered her no explanation, but said I was very sorry she had such an alarming experience, and assured her that she must never associate it with a normal, natural labour. But what interested me was the remark of this girl of twenty, who had been so completely controlled and so excellent throughout the whole of her own labour. She looked up at me with tears in her eyes and said :

" If I had heard that before my baby arrived I think I should have felt like dying when it started to come, because I should have been so terrified. I think it was the most awful noise I have ever heard in my life. It made me turn cold every time it happened."

I replied that I was very glad she had not heard it before her own baby arrived, and suggested the possibility of the other woman not having been instructed sufficiently about labour, or taught how to conduct herself, for had she learned control and been given understanding, she would have had no reason to shriek and no desire to cause such disturbance. My patient asked, " Why was she not taught ? " And in reply I handed her a small handkerchief from her bed table and smilingly suggested that she should wipe a large tear from her cheek.

Although from the point of view of the medical attendant the strict avoidance of all possible causes of fear during labour will be emphasised when the conduct of labour is discussed, attention must be given to some of the more common errors of judgment that occur.

The obstetrician should be fully aware of the extreme sensitiveness to all forms of stimulus of the parturient woman. The keenness of her perception must be appreciated ; every expression, movement and incident is observed ; no word or action passes unnoticed ; the occasion demands her fullest concentration. Nothing else matters, and everything of which the human mind may become conscious is gathered in by her alert receptors, either to increase or to decrease the tension of the moment. Any communication from those in attendance which can possibly be construed to disturb her peace is harmful. An excess of sympathy may be mistaken as foreboding trouble ; a jocular demeanour does not help to dispel her fears. Exhortation to be brave, if crudely given, is as harmful as the suggestion of lack of courage.

Many obstetricians will remember having inquired if the pain was getting worse or where the pain was being felt. It is overlooked that such questions constitute strong suggestion to the end that sensations are intensified and their interpretation as pain becomes inevitable.

Women demand above all things complete confidence in the dependability, personal strength and skill of the man who is with them during labour. They do not want soft words and sob stuff, but explanation, instruction and encouragement. They want to hear that all is going well, that the baby is well and that they are conducting their job in an admirable manner. If they are not told these things, they assume that all is not going well and become alarmed with each new, though normal, phenomenon of labour. Many women have been terrified when, at the height of a strong contraction, the membranes have ruptured; they have felt the flood of warm liquid of which they had not been warned. Many women have felt no discomfort, but have actually been interested in the hard work, until an officious attendant has asked them to say when the pain becomes unbearable as it is about time they had some anæsthetic. I have actually heard a man say in the labour room, "You had better get my forceps boiled, nurse. I don't think I shall need them, but you had better have them ready; you never know."

So many of these would-be kindly actions are prompted by ignorance of the true meaning of the phenomena of labour. The groan with which the diaphragm is released after a strong second-stage contraction is thought to be a moan of pain, demanding relief. It has no relation to pain. The tight grip of a woman's hand is not an indication of her suffering; the call for anæsthetic is not necessarily a cry to be relieved of physical agony, but a demand to escape from some impending horror that her imagination has formulated in the absence of truthful instruction.

After I had lectured to the Gloucestershire Midwives' Association, a lady of the committee, commenting upon such observations as these that I had made, related the following story:

Her niece was in labour. Being a natural and healthy girl who believed that parturition should be a simple and not a complicated act, she proceeded to play her part extremely well. Her attendant was a kindly and experienced gentleman. As the second stage progressed he was somewhat astonished at the calm and purposeful behaviour of his patient. As the violence of her contractions increased, he seemed to share with her the agony that he believed she suffered, but she quietly persevered. Peacefully unconscious of her surroundings between the contractions, she was vigorously helpful when they occurred. Finally it became too much for him;

he could sit by no longer and watch such torture, however courageously borne. He produced a mask from his bag and a bottle of chloroform. " Now, when the next pain comes, just put your face in the mask." With the next pain she buried her face in the pillow. Somewhat surprised, he repeated his request, with the same result. Feeling that she did not understand, he said, more loudly, " Now, with this pain, put your face in the mask, and I will give you a whiff." But she put her hands over her face instead. Possibly by this time his dignity was disturbed, for quietly but very firmly, with the warning of a contraction, he admonished her : " You must do as I ask you ; will you please breathe in the chloroform. It will take away your pain." She avoided the mask, however, and when the contraction had been well and truly used and she had taken one or two deep breaths and had again become relaxed, she turned her face up to him and, smiling politely, said, " Oh, do please go away. Can't you see I'm busy ? "

How many thousands of women have longed to say that, even less politely, when they have been pestered by a surfeit of sympathy and misunderstanding.

It is obviously impossible to protect women against the ravages of fear if their mental processes remain a mystery to their attendants, and the phenomena of labour are misinterpreted.

But let us consider another aspect of this subject—what does the doctor think of childbirth ? How will he influence his patients by the thoughts, unexpressed it may be, that formulate the attitude he adopts towards his patients ? Unfortunately, it is not yet recognised how the opinion of the medical man is understood by the patient not only in health but in disease, without any word to communicate his feelings. There is an atmosphere ; there is an unexpressed thought, and apart from that, there are those psychological influences which are conveyed from mind to mind by some mystic method of which we are at present unaware. There is, none the less, no doubt whatever that from one person to another a very definite influence is conveyed. Confidence is imparted or fear is awakened, and although the patient may enter the consulting-room in a state of anxiety—as indeed all patients do to a greater or less extent—it is that mystic something which the physician conveys, not only in his manner, but in his personality, which formulates the end result of the consultation. A cheerful voice, a glib remark and a smiling face is never sufficient to hide the apprehension that the physician may have for the well-being of his patient ; neither is the bald expression of confidence sufficient camouflage to cover any anxieties that linger in the back of the physician's mind. An obstetrician of no little repute once remarked to me, " When a girl

comes into my consulting-room and tells me she is going to have a baby, I often wonder how she will stand the pain and what the effect will be upon her body and her mind of the ordeal which she is so ignorantly undertaking." I look upon that as one of the most pitiful remarks that a scientist can make. He presupposed from the beginning that that woman was going to suffer an agonising experience ; he made no allowance whatever for the skill and the modern methods by which he could prevent that suffering. He knew that labour must be painful, and therefore cogitated upon how she would stand the experience of pain. In that he was not alone. It may be that many obstetricians do not even consider how a woman will behave ; they merely consider whether she will be within the range of normal, and whether the case will present to them difficulties which are likely to cause anxiety or necessitate interference.

It is generally believed in the medical profession that labour must essentially be a painful and trying ordeal to every woman. There are very few doctors who are willing to admit that they believe labour can be a pleasurable experience, because there are very few who have the slightest reason for holding that belief, and further, most doctors to-day would scorn the idea that labour could be a happy experience. And why should they think that labour could be anything other than painful, dangerous and a time for anxieties both for the woman, her relations and the doctor himself? They have been educated to that outlook ; their teachers have taught them that it is so. In the wards they saw women in pain ; it was understood that women should have pain ; they absorbed the belief that travail was the ordeal of motherhood, and nothing in their experience had ever come along to disprove that belief. We cannot therefore cast a single aspersion upon medical men who are willing to accept this mediæval attitude towards one of the greatest, or, I may say, the greatest, of all human functions. Our science has not considered the necessity for altering the views of medical men by discovering cause and reason for pain, so that the mind of the doctor may convey an honest persuasion of safety, peacefulness, happiness and success to the girl who enters his consulting-room with the information that she is about to become a mother. What they think, they convey to their patients ; as I have said before, they may try to maintain a cheerful attitude, and discuss normality and nature, but always in the back of their minds is the corollary, ". . . and should there be pain, I assure you that anæsthetic will be given ; you shall know nothing about it, and we will do our best to prevent you from suffering those things which women usually suffer."

I would make it clear that this is no accusation, and that it is most certainly not a condemnation of my professional brethren. They look upon this thing called labour, childbirth, reproduction or whatever else you will, in much the same way that those who have gone before looked upon a variety of illnesses for which no cure had then been discovered ; the wasting, neuritis, and the suffering of those who died in thousands from beri-beri, was considered inevitable. The cause was unknown ; the cure was unknown, until someone stepped forward to point out that owing to civilisation, the rice, the food of the people, was being polished, and the pericarp, which Nature had provided as the antidote to this disease, was being removed. Then it was understood why beri-beri occurred. It is now not only avoidable, but curable. The neuritis, the wastings and the horrors of that disease are no longer considered inevitable. We read that suppuration of wounds, particularly of amputations, was, by the old surgeons, looked upon as inevitable ; it was part of the disease ; nothing would prevent it until antiseptic surgery was discovered and used, and until its demonstration proved that suppuration was not necessary. Now, suppuration after a clean amputation is looked upon as a surgical failure.

And so it is with innumerable conditions to which the human body appeared to be heir in generations that are past. Until the causes of conditions which were considered inevitable were discovered, no treatment was accepted as a cure until it had been successfully demonstrated. Each pioneer who has brought forward some means by which the cause and cure of one of these accepted tragedies have been made plain, has been subjected to stern criticism, to scorn, and even to the accusations of those about him. It is always the hardest possible thing to persuade our profession that this or that need not be.

And so it is with labour. It is my belief that there is not one feature from the beginning of pregnancy to the end of the puerperium which should in any way mar the health of a woman, but that it should on the other hand increase her happiness and her physical stability for all time. I am prepared to state that in the not very far distant future, inevitability of painful parturition will be a relic of the past. I believe most definitely that since the probable causes of pain have been investigated, and since certain theories have been promulgated and demonstrated with relative success, pain will be eliminated, not by anæsthetic, but at its source.

But for the moment we are dealing with the physician and with his belief, and with, therefore, the direct influence that this belief has upon women about to undergo the perfecting of their own function of motherhood. Why, I may be asked, does this increase

the fear that a woman has of childbirth? My reply is that the average medical man is unable to destroy or prevent the causes of fear that have been referred to previously in this chapter because he is unaware of the influence of fear, and therefore there is nothing upon which his patient can place her entire confidence. It is probable that a large number of medical men who practise obstetrics dislike it intensely, but do it because, if all goes well, it is easy money. Frequently fear and pain are initiated by the physician himself owing to his entire lack of understanding of the true significance of the phenomena of pregnancy and childbirth. It is difficult to give confidence when you have none; it is difficult to impart knowledge when there is none; it is not easy to eliminate fear in another when you are apprehensive yourself. Confidence, understanding and fearlessness are essential factors in easy childbirth.

CHAPTER X

IGNORANCE OF THE FACTS OF CHILDBIRTH

It is impossible to protect women from the fear of childbirth if they are ignorant of the truth. We do not fear facts, but doubts and uncertainties. Our most tremulous apprehensions arise from anxieties lest the worst may happen. Rumour is more terrifying than assault, ignorance more nerve-racking than knowledge, however bad reality may be.

I am unwilling to believe that the fear of childbirth is a true phylogenetic development. Were it so, flight from the impending injury would not only be acquired as a reaction to pregnancy, but some effort would have been made to provide the necessary apparatus of escape. The mutations of species are frequently influenced by the necessities of survival. But unlike the fear that Crile describes as protective, there is no neuro-muscular machinery which makes flight from labour possible. True fear is phylogenetic flight (or fight). It is the outcome of the experience of successive generations throughout the ages, warning the human species of danger, injury or death.

But reproduction is an essential function for the survival of the species. Is it reasonable to believe that the law of Nature has gone so far astray that with one hand it prompts, with every wile and urge, women to bear children, and with the other restrains by pain, fear and injury the desire to bear children. The fear of childbirth is not phylogenetic flight from a natural function. It arises from ontogenetic associations, and is unnatural. The unavoidable accidents of reproduction which occur in all species would not have brought childbirth to its present ill-repute had not man interfered.

In the "Report on an Investigation into Maternal Mortality" (London, 1937) over a series of some thousands of maternal deaths in England and Wales covering a number of years, no less than 46 per cent. revealed deviations from the standard of conduct and obstetric practice which the committee thought should be attainable under present social circumstances. That is to say, nearly half those deaths were avoidable and the majority of them due to ignorance, both antenatal and natal.

"In Scotland, the percentage of avoidable deaths was found to be 58·7 : 21·6 per cent. due to negligence of the patient, and 37·1 per cent. to some faulty technique of the attendant."

In a report on the maternal mortality in New York City in 1933,

of a series of over two thousand maternal deaths it was judged that 65·8 per cent. were preventable, of which physicians' errors contributed 40·2 per cent., patients' errors 24·1 per cent., and midwives' errors 1·4 per cent.

A similar report from the State of New South Wales held that 60 per cent. of the deaths were capable of control.

Although such figures must be submitted to a most detailed examination before any absolute conclusion can be drawn, they provide reasonable evidence that next to the interference of man, the ignorance of mothers themselves is responsible for the majority of these tragedies. Such figures relate only to deaths, which happily are very rare occurrences among healthy women in England, but it is not difficult to realise how serious is the influence of these two factors, interference and ignorance, upon the maternal health of the childbearing population. To some extent this justifies the fear of labour, but it is cultural in origin, not natural. Interference is an offshoot of misapplied science, whereas ignorance of the women themselves in these " preventable " cases is more frequently active than passive. How many of the exploits of this thing we call culture set out from the harbour of ignorance ? How many finish deserted and exposed on the rock of knowledge, withered in the sunlight of truth ? Culture has been doing its best to destroy the safety and the beauty of normal childbirth for many generations. It has tried hard to demonstrate the wonders of science upon the greatest miracle of Nature. It has failed to understand the simplicity of truth and unhesitatingly introduced the complexity of falsehood.

Women have never been taught the rudiments of childbearing ; such knowledge was unnecessary when the primitive mind was undisturbed by terrifying associations. No effort has been made to counteract the propaganda of the Middle Ages. Modern science has emphasised the art of obstetrics without calling attention to the fact that there is usually a woman present as well as a reproductory apparatus.

To the women themselves, their bodies are a mystery and labour an incomprehensible activity too personal and too difficult to discuss. The wonders of reproduction are withheld ; the story of the development of a child within the body is only for those who have ears to hear.

What goes on, why, where and how are matters of interest to nearly every woman. Very few, for one reason or another, presume to inquire of these things. How the baby starts, how it grows, how it is fed and how it arrives, is not understood even in an elementary way. Woman is therefore robbed of logical reasons for the conduct of her pregnancy. It is much easier to follow a *régime* if there is some

obvious reason for it, but there is no education to assist women to understand the benefits, both to themselves and their babies, which will accrue from careful antenatal procedures. Girls of seventeen to twenty-one years of age are taught every conceivable subject but conception. They become expert in a hundred ways and means of being occupied, of earning a living or of running a house. But how many are taught to prepare themselves mentally and physically for the ultimate achievement of the vast majority of women? The subject is taboo in many places where its teaching should be enthralling. To thousands of girls of all classes this lore is passed on by hearsay and subjected to all the distortions of misunderstanding. And yet, seriously-minded and sensible girls long to know the answers to their unspoken questions ; they reach out, according to their sense of propriety, to grasp each iota of information that may help to explain some mystery. There is a hush when by accident some sentence falls from the lips of the experienced before the young—the young of fifteen to eighteen years of age ! Mothers do not understand ; how can they instruct their daughters? Schoolmistresses know of this hiatus in the national education ; few of them are mothers. Some of them give elementary chats before the older girls leave school with kindly tact and judicious discrimination. Others rely on the physiology classes of school standard to satisfy youthful curiosity. But those who would most willingly and most competently instruct have told me that they dare not do so because of the antagonism of outraged mothers who had heard it rumoured that sex might be spoken of to their daughters.

It is an astonishing truth that this most shocking of all educational discrepancies persists in many of our great girls' schools, not as the wish of the heads of schools, but because of the attitude of parents and school councils. If this is so where the seeds of understanding might so easily be sown, what of the education of the other 95 per cent. of girls who leave school at fifteen to earn their living? Their education is often only a word of caution and their protection the influence of the home.

So, on the sands of ignorance arises the modern generation of womanhood. It is not surprising that so many girls crumple either in mind or body. Their foundations give way before the winds and storms of life. If simple lessons in physiology were given at an early age, the truth of reproduction could be more easily disseminated throughout society in all classes and stations of life ; it could be taught by those who are able to instill respect and fearlessly speak of its beauties as well as its dangers. Girls will often value possessions for their beauty, and guard them from harm, but when ignorant of both value and beauty, there is nothing to lose, and if the urge is

strong enough, there is everything to gain. This state of affairs must be put right; women must know the elementary laws of reproduction so that the fears of doubt and ignorance may be minimised.

So it is that the obstetrician who knows the value of education in reproduction has to break down false teachings and overcome beliefs born of hearsay. It is pointed out earlier in this chapter how such a state exists, and the causes for such lamentable conclusions that women draw regarding childbirth.

When, therefore, the young married woman enters the consulting-room believing, hoping and fearing that she is going to have a baby, the physician's first investigation should be to see if she is pregnant, and his second examination should be of her attitude towards childbirth, both personally and generally. Close observation will unmask the true feelings of the prospective mother. We have all known the apparently indifferent women, the enthusiastic, the alarmed, the radiantly happy, the angry and the tearful. From these indications we may well mark out the psychological ground that has to be covered. Opportunity arises at an early visit to ask the important question: "Do you know, more or less, what goes on? I think you might find everything easier to understand if you had a rough idea of things." There are girls who hesitate, but not many. Only one has ever said to me, "I don't want to know anything about it." But she added, "I think the whole business is disgusting." Nearly all women are interested to learn. Some volunteer the information that they know a good deal; others a certain amount, but, alas, a high percentage own sheepishly that "they are awfully ignorant about things." What a host the word "things" covers in speaking of details of the reproductory function.

The extent to which some of my patients have been unacquainted with the simplest facts is almost unbelievable. Twice in my experience I have known of married women who, although well advanced in pregnancy, believed that their baby arrived by way of the umbilicus. One of them, it is interesting to note, was the daughter of a well-known gynæcologist. On many occasions educated girls had not associated the uterus with the development of the child; they had imagined it free in the abdomen. On one occasion I was asked by a girl who had just felt her baby quickening, "Why shall I have such a small baby?" When I inquired why she thought she would have a small baby, she explained that she thought the size of the baby was equivalent to the lump in her tummy which, in some strange fashion, remained a lump until a certain time, and then suddenly became a baby. Women have told me quite seriously that they expected the baby to be about six or

eight inches long only when it was born because they could not see how there was going to be room for it to come out if it was any bigger ; although they had heard of the normal weight of a baby, they had no size-weight relationship in their minds. On one occasion I was confronted by a woman who visited me for the first time when she was seven months pregnant. She asked me how her baby was getting air. It was quite difficult to make her understand that although alive and moving, it did not breathe. She had attributed to her umbilicus the ability to provide air for her child.

And so on. These astounding records of ignorance, and many others of a more intimate but none the less devastating nature, are to be found.

I must, however, balance this account by referring to those who come well informed and happy, inquiring only to learn more detail. Because of my beliefs, it is natural that many come to me believing as I do. Later on, reference will be made to the experiences of such women as these.* I have the permission of many to quote their own statements in which they describe the arrival of their children. Women who have learned and who understand afford the best evidence of the tragedy of ignorance, for dark clouds look darkest when in the same sky the sun shines brightly.

* See Appendix.

CHAPTER XI

THE PHENOMENA OF LABOUR

It is one thing to assess the strength of the enemy, but it is another to conduct a campaign in order to win a battle. So far we have considered the association of pain and fear with labour. Whilst disbelieving in the necessity of pain and deploring the prevalence of fear, both are almost invariably present in what is known as normal labour. Not only the lay public, but the medical profession as a whole accept pain and overlook fear. It is obviously a very difficult position to uphold, and although from a careful scrutiny of the facts that have been collected the theory of natural childbirth appears to be logical, the majority of the civilised world had good reason, from practical experience, to discard the theory.

What 98 per cent. of childbearing women have felt and 100 per cent. of obstetricians have taught and believed since man became civilised is quite likely to stand the test of assault, especially when that assault is made by a lone voice crying in the wilderness. Theories alone are useless ; they must have practical application, and even then, however successful the results of practice, they are likely to be scorned by those in authority who are not prepared to give them fair trial, or for whom it is inconvenient to be impressed.

These considerations, however, have in no way influenced me to give up what at first sight appeared to be an impossible task, and the decision was taken some years ago to manage normal pregnancy and conduct uncomplicated labour in the belief that intense pain is unnatural and pathological. Pain was caused by tension and tension by fear. For years an aphorism was imprinted on my mind, "Tense woman ; tense cervix." All obstetricians know the effect of a tense cervix : pain, resistance at the outlet and the innumerable complications of a prolonged labour with probably an operative finale.

It became obvious that the first place to strike was at the cause of tension. I believed that to be fear ; therefore, a closer study of fear in relation to childbirth became necessary before it was possible to try and eliminate it. In the previous chapters there is sufficient evidence to show that the fear of childbirth originates from so many sources and from such high places that the whole scheme of society would have to be altered if the attack were made at the source. It was equally obvious to me that those who have suffered were very unlikely to refrain from saying so, and even less likely to preach

that their suffering was unnecessary. It was also rather difficult to go round saying that the Bible and the Prayer Book do not really mean what they say. And finally I came to the conclusion that it would not be much fun to shake a theory in the faces of my confrères as a means of persuading them that all the greatest obstetricians were wrong, and that on no account should anyone believe what they said. It appeared to me to be rather like a flyweight squaring up in the corner of the ring to, not one, but a dozen professional heavyweights.

It will be seen that the correct line of procedure was not obvious. On the other hand, I must own to a profound affection for my theory, and that, combined with a modicum of quiet pigheadedness which always stimulates a Norfolk man to discount odds, prompted me to get on with it without further " quavery mavery." An effort was made, therefore, to educate women in the facts of pregnancy and childbirth ; to promise them nothing, but to assure them of relief from their doubts. I soon received encouragement, for it became obvious that many women instinctively felt the truth and disbelieved in the necessity for suffering. That did not appear to be enough, for it was found that as soon as labour commenced, the accepted principles upon which it was conducted actually produced a state of tension in the body. Exaggerated receptivity of the mind at that time to all forms of stimulus, both physical and psychical, swept aside their good intentions, and defeat had to be acknowledged. Some method had to be found to overcome this main weapon of the enemy, which was tension.

So the practice of physical relaxation was introduced, not just at the time, but during the last four or five months of pregnancy. By applying this to the conduct of labour it was found that the mind remained at rest, muscular control was possible and, what was more gratifying than anything, the interpretation of the sensations experienced during labour was not invariably that of pain.

In a short time I was more astonished than my patients. In the absence of turmoil, anguish and misunderstanding, many of the phenomena of labour appeared in their true light. After not more than two years, the results of the application of this theory had not only established my own belief in it, but—what was far more important—the large majority of the women whose labours had been conducted in accordance with it, had an entirely new attitude towards childbirth.

As time went on and experience increased, a closer understanding of the minds of women in labour became possible. Education and explanation dispelled their doubts ; a good courage was born of that confidence ; they became interested in the performance of

their own parturition. To my astonishment they held the apparatus of anæsthesia in their hands with full knowledge of its use, but refused to take it. They were able to criticise their own sensations during labour, and to differentiate between hard work and pain. Those who had learned relaxation not infrequently lay as if in a trance throughout the first stage, and throughout the second stage their receptivity to stimuli was lowered to such an extent that many were unconscious of incidents that occurred and words that were spoken during that time.

It is necessary, therefore, to explain what is meant by " education." There is no rule of thumb to such teaching, for no two women will or can accept facts in the same words. It is not a question of social class, for similar varieties of women are represented in all classes of society, and judgment must be used in each case. The same applies to the ability to attain relaxation; some are better than others, and the results vary accordingly. A short description of the methods applied in the teaching of relaxation will be given.

When labour starts, each woman must be treated according to her understanding, and having outlined the general conduct of labour so that all fear may, as far as possible, be eliminated and physical relaxation attained, I propose to relate what has actually occurred during the labours of different types of women.

Then the observations of the women themselves will be reproduced over a consecutive series of normal labours. These will include remarks upon relaxation, the conduct of labour from the woman's point of view, anæsthesia, and their impressions of the birth of a child. These few chapters will constitute a record of the ways, means and results of the practical application of the theory that has been set out in previous chapters.

There will be certain clinical observations to make upon the phenomena of labour, anæsthesia, and philosophical considerations of motherhood, all of which are in direct relationship to the contest with the existing teaching, and all of which are to the end that the pain-fear-tension complex as a necessity in childbirth may cease to cast its shadow across the glorious art and science of obstetrics.

The expression " phenomena of labour " has been used several times in preceding chapters. It does not appear to be generally recognised that parturition is divided into three definite stages by signs and symptoms. The first stage is not just the dilating of the cervix uteri; it is a part of the process of labour which presents certain features, all of which can be shown to be purposeful. If a woman comes into labour with her neuro-muscular mechanism deranged by fear-tension influences, she does not experience the

phenomena of normal labour. For fear-tension is pathological, and the resultant cortico-thalamic impulses produce abnormal conditions of mind and body which override and inhibit the natural processes. In the presence of fear, elation is impossible, but where education has been satisfactory and the commencement of labour is the joyful prelude to her child's arrival, a woman is conscious of each uterine contraction as a harbinger of her highest ambitions. Elation, rejoicing, and a strong sense of contentment and relief is the natural emotional reaction to the onset of labour.

There is abundant evidence to show that " pains " under these conditions are painless. A woman may be conscious of uterine contractions for hours, but have no discomfort until she is told that she is in labour. The association of parturition with pain is so firmly implanted in the minds of women that the only interpretation of these new and mysterious sensations is pain, unless they have been well and truly educated in the art of labour before its onset.

I use the term " elation " in its strict meaning. It is not a simple happiness, but an exaltation of the mind resulting from the feeling of success and pride in the confident approach of the reward of pregnancy. Many women become conscious of their own importance at this time, and the strong instinct of self-assertion may be observed. This state is not often seen by doctors because they are rarely, if ever, present at the beginning of a normal labour. But good midwives know it well and do their best to preserve it until the doctor arrives. The majority of women who do not fear labour ring up on the telephone in a cheerful spirit when they think they have started. Such phrases as, " I think I have started. Isn't it heavenly ? " or " Things are happening ; I am so thankful." This emotional state was described to me by a vivacious, intelligent girl in simple yet dramatic words. I have previously quoted them in " Natural Childbirth." " I have never known such a sense of joy," she said. " I walked out into the garden ; I felt an irresistible desire to parade myself. I made a point of going to speak to the gardener ; I told the chauffeur to be ready to go out in the car at any moment ; I have no idea why, but it seemed as near as I could reasonably go to telling him that my baby was coming. I walked down the drive and up and down the road for five or ten minutes, feeling in the back of my mind a hope that I should meet some of my friends. My time had come ; my baby was on its way ; after all it was true. I believe now that I actually exaggerated my shape."

This is only one example of many instances that have been recorded to me. Women do not hesitate to say they are glad when their baby is coming at last, but few will volunteer, without questioning or inquiring, to describe the profoundly stimulating

mental impulses that accompany the onset of labour when complete confidence in its outcome dispels all fear.

The emotional state is of the utmost importance. The sequence of events from elation is—determination, calm, relaxation and neuro-muscular harmony with sympathetic nervous system inhibition. Fear, however, promotes a desire to escape, mental turmoil, tension and disturbed neuro-muscular harmony with the sympathetic nervous system impulses overriding the pelvic autonomic. Elation maintained under these normal psychological sequelæ produces an easy, unimpeded first stage and is natural and primitive, but fear maintained until the vicious circle of its influence has produced the state of resistant tension, pain and exhaustion is pathological and cultural.

To all nurses, mothers, midwives and husbands, I say: Do nothing to destroy the cheerful courage and confidence of the girl who has commenced her labour with her mind in that state; bury your own anxiety and fear and share with her the spirit of victory about to be achieved. You will thereby assist in paving the way for her progress to uncomplicated motherhood and ward off the greatest enemy to her neuro-muscular perfection. There are few greater obstetric crimes than to become a serious busybody, who demands compliance with illogical and baseless conservative principles, such as those who request silence, speak in whispers, parade a mass of so-called essentials ready to deal with all emergencies. The kindly sympathy and word of warning advice is disturbing to a happy girl; she does not wish to visualise her labour as progressing from one horror to another, culminating in a "when-the-pains-are-too-bad" time. She sees only the impending joy of her child's arrival, and believes that it will come quickly and easily. Elation is an emotional state, but it has profound physical manifestations; it is not only a part of the reward of childbirth, but it is a phenomenon of which Nature takes most subtle advantage to facilitate the safe reproduction of her species.

I was speaking to-day to a midwife in charge of a large area south of the River Thames. She has been assiduously carrying out antenatal education on the phenomena of labour. By explaining what happens when the baby starts to come, an intelligent interest has been awakened in the minds of the women whom she attends. The ignorance amongst such women appalled her at first. "What do you know about childbirth?" she asked. "Only what Mum has told me." "And what has she told you?" "To be sure and do as the nurse tells me." And that has been for generations their only prenatal education. Unfortunately the nurse cannot always remain with primiparæ; her busy life demands visits to other

women whose babies have arrived during the previous fortnight. So for a time many young girls are left to the tender mercies of friends and neighbours during the early first stage of labour. " That is where my greatest difficulty lies," this nurse explained to me. " Not only mothers and mothers-in-law, but friends and neighbours crowd in and offer with one accord the time-worn advice, " 'Ang on yer pains, dearie ; 'ang on 'em " ! ! So from the beginning of labour the poor child is encouraged to push and bear down, pull on arms outstretched to help her and exhaust herself in the effort to help which results only in hindrance. It seems impossible for women to realise that for the first stage of labour peaceful relaxation, quiet assurance and disassociation of the mind from the mechanism of the uterus is essential. Even many midwives and medical men seem to be unaware that any effort to assist first stage contractions is designed to defeat its own end. The secret of rapid cervical dilatation is disassociation ; the more flaccid the abdominal muscles and the muscles of the pelvic floor remain so much the more easily can each uterine contraction pull the cervix over the head that is being gently pressed down into the birth canal. Any general tension of extra uterine and skeletal muscles brings into play the circular fibres of the cervix and lower uterine segment. Determined and fruitless bearing down diminishes the elasticity of the pelvic tissues and produces exhaustion from the use of power in its wrong place and at the wrong time.

Relaxation must be recognised as a necessary phenomenon of natural labour, and it should be accompanied by a disassociation of the mind from any active interest in the uterine function. How often have I said, " You can do nothing to help yet ; allow your uterus to get on with its work undisturbed by your inquisitive interest. If you interfere it will resent it, and hurt you." Almost invariably, that advice, when acted upon, results in the relief of pain and discomfort that was being caused unwittingly by efforts to assist.

But even if efficient relaxation and disassociation are practised, there is always the possibility of a few relatively painful contractions at the end of the first stage—the final dilatation of the cervical canal. The pain is referred to the mid-sacral region, and can be relieved by firm rubbing, or more often by really hard pressure on the sacrum. It is described as an acute ache, and sometimes persists between the contractions. It is caused, in the main, by the maximum stretching of cervical and lower uterine muscles. There may be small lacerations of tissue, for not infrequently such contractions are followed by a definite show of blood. I suggest that this is a

simple mechanical phenomenon, for when a ring is expanded by a sphere, the mechanical advantage of the downward thrust of the sphere increases as the diameter of the ring enlarges. Similarly, if a series of rings is being pulled over a dilating spherical object, the larger the rings become, the greater the expansion caused by a given force. *Vide* "Natural Childbirth" (Heinemann, 1933), Chapter VII, pp. 78–81.

Normally, a cervix is dilated much more rapidly from three inches to full than from half an inch to one and a half inches. The last few contractions increase the tension in the already well-stretched tissues of cervix and lower uterine segment so relatively violently that the normal nociceptors record pain stimuli as a reaction to stretching and laceration. This is referred to first, second, third and fourth sacral areas of Head. If, at this stage of labour, there is pain anywhere else it is probably due to some factor not usually present in normal labour. For instance, acute pain in the twelfth dorsal or upper lumbar region is not uterine in origin, but arises in the structures which take the strain of labour, but which, if healthy, should do so without discomfort. On many occasions I have formed the opinion that the only true pains of normal labour, if present at all, are the last few contractions which completely dilate the cervix. When this discomfort is recognised and its significance appreciated, a woman may confidently be asked to put up with about six or eight such contractions. The reaction to such a request is almost invariably an easy compliance. "If it is only six or eight, I don't mind, but I thought it might be going on and getting worse all the time now." And so it proves to be true; this short phase passes into the more definite but completely different second stage. The discomfort of the end of the first stage lifts, either gradually or suddenly, and this appears to depend upon the mode of onset of the bearing down reflex.

Sometimes a uterus calls for external help immediately the cervix is fully dilated, but, on the other hand, the cervix may be fully dilated for some time without any reflex demand for assistance from the extrinsic muscles of expulsion. Therefore, it is advisable to introduce to the contraction a stimulus to this important reflex. This is done through the respiratory function.

In the first stage, respiration is naturally free and slightly increased in rate during contractions, followed by one or two longer and deeper breaths as the uterus relaxes, as occurs after the prolonged contraction of any muscle in the body. But in the second stage, as a contraction develops to its greatest tension, a deep inspiration is made, and it is held during the bearing down effort. Now, if the cervix is dilated fully, the woman should be made to draw a deep

breath and hold it at the height of the next contraction. Not infrequently, after doing this once or twice she will begin to bear down and will remark upon the satisfaction the effort affords her. Once the reflex is started in that way it continues and the distinctive phenomena of the second stage become increasingly apparent. With the uterine contractions, somatic relaxation is impossible, but between them it is easier than at any other time during labour ; in fact, as the uterus works more violently in its effort to expel the baby, a relaxed sleep in the intervals of effort is commonly observed. It is not easy to explain, however, why the " pain period " of labour, when it occurs, may persist until the second stage is relatively advanced. I suggest that a possible explanation of this may be found in the initial changes that occur in the mentality of a woman at this time. As the second stage becomes fully established, the acquired social habits and manners are thrown off. She becomes aware of the conscious effort demanded of her to help so far as possible in the expulsion of her child. She is engrossed in her task, and concentrates upon the all-important occupation of the moment ; she becomes oblivious to her surroundings and careless of her appearance, expression and speech. Normally—that is, in the absence of any dominating fear—she is devoid of any consciousness of herself and employs all her energies to the fulfilment of the immediate purpose. When the muscular effort ceases, her mind and her body relax, and she passes into a restful, sleepy state, sometimes into a deep, snoring slumber. This condition of complete alienation from other thoughts and associations either causes or passes into a state of amnesia and partial anæsthesia ; the perception is dulled and the interpretation of stimuli through the normal channels clouded. Some years ago I wrote : " It is possible that the initial stages of the lowering of mental acuity which results in the typical amnesia of the second stage may have a direct result upon the interpretation of sensations that arise at the end of the first stage. As the mind becomes clouded and the awareness of the woman decreased, so the interpretation of pain appreciation must be temporarily intensified with the gradual release of conscious control, just as our mental images as we sink in sleep are more vivid though less accurate than those we see when widely awake."

This may or may not be the case, but it is an observation made beside the beds of women at that time. So frequently does the drift into amnesia or dulled consciousness coincide with the only pain interpretation of normal stimuli throughout the entire labour, that some association between the two phenomena is possible. As the level of consciousness is lowered still further, so all pain interpreta-

tion of the sensations of labour disappears, and only the truth of the instinctive subconscious mind remains.

I cannot lay too much stress upon the necessity for recognising this amnesic state, and the changes in perception, interpretation and reaction that accompany it. It is a phenomenon of first magnitude and importance, for if this state is acquired with the mind in a turmoil of doubt and fear, the frontal areas of discretion and discrimination react to the most potent and unimpaired stimuli which instinctively are fear and self-protection. This accounts for the unbalanced behaviour of the uninstructed woman during the late second stage. If control is removed from a mind the background of which is peacefulness and confidence, a quiet confidence remains, but if control is removed from a mind struggling against doubts and fears, then the reactions to uncontrolled fear become apparent, and above all the effort to escape at all costs and by any means obtainable resolves itself into a pitiable appeal to the sympathies of those at hand.

It is because of this lowered state of consciousness that women become distressed and almost maniacal; it is their uncontrolled fear that prompts them to escape by pleading for help. How often has the obstetrician heard, " Can't you do something, anything, to get me out of this ? " The fundamental belief in pain permits only the interpretation of all sensations as agonising in the absence of her discriminating senses. The onset of every contraction is the harbinger of renewed torture; the expectant tension of her mind results in early exhaustion, and the excessive drain upon her nervous energy produces the symptoms of profound shock. There is no pretence or play-acting in this; the woman suffers; she cringes and writhes in her agony, and her pitiable appearance rightly calls for all the encouragement and relief within the power of the physician to give. Her cry for anæsthesia is an escape demand. How infrequently is it realised that the majority of women fly from fear into unconsciousness and not from true physical pain. This is best demonstrated by the complete absence of physical pain when peaceful confidence and courage are the scaffolding of the mental structure. " Hard work, yes; the hardest work I've ever known," is the criticism of the fearless woman. The physical reactions to the emotional state in the second stage must be more clearly understood if interference by so-called surgical manœuvre is to be avoided in normal cases.

Constant assurance of adequate progress sinks into the dulled mind if quietly and considerately given. Your patient may wish to hold your hand; she may wish to lie with her head on your arm; she may call for you to be beside her, but most certainly she

desires the unwavering strength of the confidence that you share with her in the successful issue of her trial. And trial indeed it is; for in labour a woman shows her true colours—the patient and impatient; the courageous and "gutless"; the "I-can-and-I-will" women and the "Oh-please-I-can't-and-what's-more-I-won't" women, are all met with and all require different handling, but with one accord they seek encouragement and comfort in the support and strength of their guide and protector in labour. The obstetrician, alas, is in an unenviable position if he has not educated her to understand the experience before it commences, and she is indeed in an unhappy dilemma if the significance of the phenomena of normal labour is not understood by her physician.

If, however, he is not only kind—"perfectly sweet" in fact—but also brilliantly clever (most obstetricians are if they are lucky), at an early stage he can dope her and later administer an anæsthetic. It is easier and so much quicker than trying to comprehend the cryptic designs of cruel Nature. The antepenultimate stroke of genius is a forceps extraction, the penultimate dexterity is stitching her perineum, and the ultimate evidence of foresight is a good gynæcological patient for years to come, when with advancing age the obstetric art becomes too exacting.

But let us take another view of this picture. It is absurd to expect a sympathetic man to sit by and watch a woman suffer when he has at hand all the means of preventing it. The suffering is so real, so acute and above all the long-drawn moans sometimes resolving into sobs of desperation and hopelessness, are sure evidence of her agony. This aspect of labour is accepted and taught, and in the honest belief that these manifestations are immutable and unavoidable, humanity with its noblest gesture has stepped in to slay the dragon and so free the princess.

This is no satire upon the escapades of modern science, and certainly no lampoon upon any erudite contemporary, but a simple justification of the ways and means at present employed for the relief of women in labour.

So long as the phenomena of labour are not observed, and the design of Nature in the series of events that occur throughout parturition is not recognised in its full importance, no other way lies open to those who would relieve pain. Until the mind and its emotional forces are understood in an elementary manner it is obvious that the physical manifestations of cortico-thalamic impulses are likely to be misunderstood.

Take, for yet another example, the grunting moans during a second stage contraction. In an uncomplicated labour they vary as the woman's emotional state and not only as the strength of her

muscular activity. In a natural labour, these moans have no association with physical pain. The large majority of undrugged and fully informed women have very little if any discomfort with second stage " pains," but a deal of hard work. It is the grunt and groan of a man who pulls successfully upon a rope ; the physical strain is of the utmost ; his determination adds to the violence of his effort ; when he relaxes, it is with a groan of satisfaction and relief that he may rest in preparation for the next pull, and having rested he is ready for a renewal of his exertion. So he struggles in the sure confidence of victory until at last his objective is attained, and according to his valuation of the prize, so is the joy with which he hails success. His contortions have not been accompanied by physical agony, though his facial expression may well have represented it. His groans have been physiological, for our bodies abhor a sudden change of tension and most of all a sudden drop of intra-abdominal pressure. The diaphragm must be gradually released and the muscles of the chest slowly relaxed from the strain of their rigidity. There is nothing to cause purely physical pain, but the partial closure of the larynx which produces the grunt, groan, or long-drawn moan is a part of the design for safety after effort.

But consider the man whose rope is irresistibly pulling him towards agony and death. As he takes each strain, terror fills his heart ; each violent and prolonged effort seems to bring him nearer to inevitable torture, and with each relaxation from the tension, his expiration is released with a cry of anguish that is born of exasperation. He will seek to fly from his torment, but cannot break away from his task ; he will call long and loud for help which cannot reach him. He knows the certainty of his appalling fate, and as he feels the dreaded moment approaching he is filled again with apprehension that saps his strength and drains the courage from his spirit. This is not physical pain, but the anguish of travail. He has heard, he has been told, and he believes that all who have fallen into the clutches of this inquisition have suffered. How can he escape? He does not escape unless help is available, for he has but one interpretation of his experience, and to its influence he succumbs.

These two pictures represent closely the difference between fearless, natural childbirth and the parturition of a terror-stricken woman unaided by sound instruction and unfortified by elementary education in the nature and conduct of her task. This moan and cry which prompts solicitude and kindly interference is a natural, painless phenomenon, and should be encouraged, but controlled. Women have inquired of me many times, " Why do I make such an awful noise ? " It has been explained that it is as it should be,

and is nothing to be ashamed of; it has a purpose and I like to hear it. " But," they have added, " I don't like to make such a fuss ; there is no need for it." How many obstetricians have heard after the baby has been born, " I am so sorry I made such a noise. It seems so unnecessary, but I simply couldn't help it." If unexplained, this crying out may increase the fear which until that time had been well controlled. The old question arises : " Do we fly because we fear, or do we fear because we fly ? " If for " fly " we substitute " cry out," it is exactly the same problem. Women are often afraid because they hear their own strange, uncontrolled cry. This has so frequently been the opinion of intelligent women with whom I have discussed the question, that the well-known Amand Routh's case (*Obstetric Transactions*, Vol. XXXIX, 1897) will help to confirm the view expressed above :—

A multipara, aged twenty-two, who had had three deliveries previously, had an accident which caused complete paraplegia below the level of the sixth dorsal vertebra. She had fallen fifteen feet through a trap door, holding a baby in her arms. She was one hundred and ninety six days' pregnant. The accident resulted in complete anæsthesia and analgesia below the sixth dorsal nerve distribution, and motor paralysis. (Absolute paralysis, both motor and sensory.) Sixty-four days later she came into labour, and had a child weighing 5 lb. 12½ oz. During the *first stage* the patient was quite unaware of what was going on, feeling no pain whatever.

At the *end of the first stage*, the contractions were strong and prolonged, with small weak ones in between them ; there was no pain or discomfort.

Second Stage. Contractions every two minutes lasting forty-five seconds approximately ; strong and useful ; head descended well. She then stated she was conscious of a tight feeling, not painful, but which restricted her breathing.

About one and a half hours later contractions were strong, and there were more signs of distress in the patient. She complained of no pain and only experienced a feeling of tightness at the epigastrium. She held her breath involuntarily and cried out on expiration. The crying out was especially evident as the occiput emerged from under the pubic arch.

These reactions to late second stage contractions occurred in the absence of any pain or discomfort. Can it be correct, therefore, to assume that such reactions must necessarily indicate pain or discomfort ?

There is yet one more observation upon the anæsthesia and analgesia of the second stage. The actual passage of the baby through the vulva is often accomplished with so little sensation

that the woman is with difficulty persuaded that her baby has arrived ; until she sees or hears it she is unwilling to believe it is born. In a natural labour the perineum is practically insensitive. When a tear of the fourchette occurs it is rarely felt to any degree comparable to a similar laceration of surface tissues in other parts of the body. We are not told, " I have split and it hurts." But the fieldsman at cricket who does not quite get to a hot one and splits between his fingers knows whether it hurts or not. When this small perineal laceration occurs, I invariably put in the one or two stitches required at once, and by using a semi-circular needle of an inch or an inch and a quarter in its greatest diameter, the operation can be done with little or no discomfort, especially if the point of the needle passes quickly through the skin at right angles to the surface both in and out. I have never had a patient who considered that an anæsthetic should have been given. These stitches are not tied until the placenta has arrived, and it is interesting to note that the tying, if not very gently done, is likely to prove much more uncomfortable than the insertion. This is probably due to the sensitivity of the perineum returning after twenty or twenty-five minutes.

This relative anæsthesia persisting in the early part of the third stage of labour is worthy of note, for it allows of immediate suture of all small lacerations, whereas an anæsthetic is definitely indicated if the woman is left some hours before the suturing is performed. It is probably true also that lacerated surfaces brought into apposition before coagulation has occurred heal more quickly and more firmly than those which remain open before they are repaired.

There is one phenomenon of labour to which I must refer in considerable detail. It is the arrival of the baby. To women who have been unconscious at that moment this conveys nothing but an extravagant mental picture. To those who have suffered the prolonged agony of anxiety, doubt and pain-producing fear, this only reads as a myth without any foundation of truth. Many such women find it hard to welcome the child who has caused them to suffer so acutely. But to those who have been educated and trained both physically and mentally for the final episode of pregnancy and who have borne their children according to the laws of Nature, the truth of these observations will recall the tenderest memories of mother love.

It is my custom to lift up the crying child, even before the cord is cut, so that the mother may see " with her own eyes " the reality of her dreams. I have been told that no woman should see her baby until it has been bathed and dressed. My patients, however, are the first to grasp the small fingers and touch gingerly the soft skin

of the infant's cheek. They are the first to marvel at the miracle of their own performance ; to them indeed is due the inspiring reward of full and conscious realisation. That there is anything unsightly in the appearance of a new-born babe is nonsense ; that a mother might be shocked at her own baby is fantastic. Its first cry remains an indelible memory on the mind of a mother ; it is the song which carried her upon its wings to an ecstasy mere man seems quite unable to comprehend. But like all other natural emotional states, it is part of a great design ; its magnitude is significant of its important purpose. No mother and no child should be denied that great mystical association. Its purpose is not only to perfect the restitution of the structures concerned in parturition ; it is not only advantageous for the immediate present, but it lays a foundation of unity of both body and spirit upon which the whole edifice of mother love will stand.

Many times I have called attention to the wonderful picture of happiness that we see at a natural birth. Women of all ages and types have testified to this " greatest happiness in their lives." It is a moment when, in the full consciousness of their achievement, they experience the most intense emotional joy. " I have never felt anything so marvellous ; it cannot be compared to ordinary pleasure." If this is intended, and is one of the series of physical and emotional states in the natural law of parturition, what reason can we assign to it ? Why should the serious hard work of the second stage, with its dulled senses, lowered receptivity to certain stimuli, and sleepy relaxation between the contractions, suddenly disappear ? It is not just an accident that the brilliant sunlight of motherhood breaks through and dispels for all time the clouds of her labour. No change in human emotions is more dramatic. The quick temper that flashes from calm to rage, with all its disturbing variations of sound and appearance, is dull and crude when compared with this amazing metamorphosis. I have sometimes been constrained to desert my established custom of observing with impersonal interest the phenomena of childbirth. Such an aura of beauty has filled the whole atmosphere of the room, and such superhuman loveliness has swept over the features of the girl whose baby is crying in her hands, that I wonder if I am right in my stolid abstinence from spiritual participation. " Strange talk," my reader may remark, " from fourteen stone of Norfolk brawn." But with all sincerity I repeat that I have experienced a sense of happiness myself much more akin to reverence and awe than to the simple satisfaction of just another natural birth.

This phenomenon is so definite and so inevitable if preceded by the uncomplicated events of a relaxed and relatively painless labour,

that it is not unreasonable to ascribe to it some result. All emotional states have a definite purpose, and the more closely we examine the physiological changes consequent upon emotional activity, so much the more clearly the functional advantage of such states becomes apparent. The poise, facies and movements typical of horror, terror, sorrow, pain, anxiety and rage are not for the benefit of those who observe them. They are physical reactions to emotional states, and part only of the general reinforcement, fortification or escape necessitated by the stimulus. Digestive, chemical, endocrine and excretory processes are subjected to these emotional states, so that the most advantageous conditions may prevail in the individual to meet the emergency. In comparative degrees, these emotions are less important and the facies are not so easily defined. Mild disgust, slight fear, disappointment, discomfort, doubt and annoyance are minor causes of excitation or irritation of the central nervous system which do not produce major general reactions. The gradual and persistent inroads of these harmful emotions take toll of the nervous energy over a time ; the insidious disease not only saps the vitality of the higher centres of control, but the harmony and balance of all bodily functions are disturbed. Both visceral and somatic symptoms of impaired health appear ; secretory and excretory, sensory and motor, perceptive and interpretative mechanism, are liable to variation incompatible with health or happiness.

This state of chronic mental tension is frequently the cause of minor ailments of pregnancy, such as vomiting, heartburn, tiredness, salivation, constipation and anorexia. Although we are concerned here with pregnancy and parturition, how easy it is to see the major causes of illness in modern civilisation. It is indeed rare to meet a disease that has not a background of some irregularity of nervous impulse underlying its physical manifestation.

These things are the negative forces of health ; they are the militant and destructive ranks of unsublimated emotional tension ; they are of the omnipresent powers of evil from which injurious suggestion flows through all civilised communities.

But fortunately there are positive influences with a fund of pleasure and health-giving happiness about us. Legions ranged along the frontiers of the natural law are both protective and constructive. We see the rejuvenating pregnancy of women who have faith in the mysterious force that guides them safely through the intricacies of the great adventure. They are aware of their own ignorance, and live happily in a state of mental and physical relaxation, leaning confidently upon the belief that all will be well. These are the women who pass through labour undisturbed ; who

assimilate instruction and so assist the mechanism of reproduction. They are free from the negative influences which bring mental and physical tension. Their interpretation of sensation from the birth canal is controlled and truthful; they allow expulsion without resistance, and finally reap the reward of consciousness in the reactions of the body and of the mind at the final moment of achievement. The overwhelming delight activates the sympathetic nervous system and all the forces of that great protective mechanism are bought into play. The inhibitory fibres no longer lie relaxed and passive in the birth canal; the circular bands bind firmly the muscles of expulsion, and the uterus, as if in answer to the cry of the new-born child, becomes hard and remains contracted. Let every obstetrician and midwife feel once the brisk contraction of the uterus when the mother hears her child; it is the natural stimulus to close the great blood sinuses, and render the placental site anæmic, and so hasten the separation of the useless after-birth "No bleeding at all" is frequently recorded, except the ounce or two of placental blood that comes away at the end of the third stage. Thus the physical reaction to this natural emotional state protects the mother from excessive loss of blood and delayed expulsion of the after-birth.

But this is not all. When exhilaration and intense joy are experienced physical changes occur which are readily diagnosable at sight and strangely infectious. The ecstasy of love that floods the whole personality when the earliest call of new life awakens a woman to the realisation of motherhood, is a transport akin to mysticism. In perfect childbirth, this constitutes a spiritual perfection to a physical achievement. Many women have written to me of this highest plane of human happiness, "Something of which no woman should be deprived," "A moment no words can describe," and so on.* What does it mean? I do not know what inference can be drawn from such superlative expressions. Many perfectly sane men accept the metaphysical evidence of continuity in some form after this life; to many, death is a translation only. I have never been persuaded, when in the presence of death, that I am watching the end; no part of that experience breathes finality to me. Whether it has been on the battlefield or in the bed, I feel a sadness that is only selfish. I know that the vehicle has run its course and stopped, but its spiritual self has gone on. It is not a belief; it is a feeling without logical thought and without conscious ethical bias.

* Professor Andrew Claye ("The Evolution of Obstetric Analgesia," Oxford Med. Pub., 1939, p. 95) refers to this as "The sentimental pleasure of hearing her baby's first cry."

And so, too, when a child is born unhampered by the limitations we moderns tend to put upon the natural laws, I feel the happiness, the miracle of life and all the host of wonders that awake its mechanism. It lives, we do not know why, we do not know what for ; we may think we do ! But here, from the indestructible forces of the universe, arrives a new human form. It is unlike any other ever seen ; different in a thousand ways from its most similar brother. It has, however, the great common denominator of all humanity—Life ; that inestimable gift which from the first moment is our responsibility—Life, which arrives, is marred or magnified, and passes on.

Is it surprising that at a moment of such stupendous importance the girl who has been chosen to be the instrument of perfection in the natural law of survival should be rewarded by a sense of exaltation ? A new life, which of its very potential power is greater than death, should be logically heralded with pride and joy. In every new-born child there is a new hope ; to every mother the people should give thanks.

But is it not here that the obstetrician should realise his privilege and his responsibility ? Labour is the final act which brings a fully developed human being into the world ; it has for months been influenced by the thoughts and psycho-physical reactions of its mother ; already it is predisposed to a familiar pattern, but we see it suddenly possessed of individuality. It has not the ability to speak our tongue ; its cries are not the tears of sadness but commands and demands for essential services. It looks at us and sucks its fingers ; sneezes and expands its lungs in physiological song ; it kicks and waves its arms ; it micturates and grunts to expel meconium ; within a few hours it learns the reward of importunity ; within a few days it exhibits all the wiles of the physically helpless ; by the end of a week, mother love has taken a willing child beneath its wing, or flaps pathetically to satisfy the new-born tyrant's whim.

The longer I live, the more I am inclined to believe that there is some important truth in Freud's statement that subconsciously a child lives again and again the moments of its birth. From such influences the foundation of a mental structure may be built. Can we overlook this possibility ?

CHAPTER XII

ANÆSTHETICS AND ANALGESICS

It is not sufficient to offer a theory for the explanation of the phenomena of labour without some substantiation of the facts that practice based upon that theory have brought to light. One of the most interesting, and possibly the most important, is the attitude adopted by women in labour towards the administration of drugs and anæsthetics. There is abundant evidence that parturient women, from whom education and treatment have eliminated fear so far as it is possible, have no desire for reagents exhibited for the sole purpose of relieving physical pain. The relation between fear and pain has been discussed ; we know that fear influences every organ and tissue of the body. The defensive or escape apparatus is stimulated, and the activities of organs not associated with that apparatus are inhibited. We know that the excessive energy output under the influence of fear results in profound exhaustion, as the stimulus drains the normal supplies of nervous energy ; how much rather, then, do both fear and pain result in exhaustion and shock. Crile wrote in " The Origin and Nature of the Emotions " : " Fear arose from injury and is phylogenetically one of the oldest and surely the strongest emotion. Fear is phylogenetic flight."

If, however, by education and relaxation the injury complex can be eliminated, the fear of labour can be destroyed. It has been shown that in the absence of fear the pain of normal labour, when properly conducted, is practically negligible. This has been demonstrated in a large number of cases by the women themselves who, though holding the mouthpiece of a pain-relieving device, refused to take the gas, and resented the implication that they were suffering physical discomfort. This is an observation too frequently recorded to be waived aside as mythical ; it is a fact established beyond the doubts of the most sceptical. There are thousands of women every year who are given anæsthetics and analgesics against their wishes, women who instinctively believe in the correctness of their natural function. Let it be emphasised once again that it is normal labour to which I refer.

But what is this normal labour which enables women to escape the necessity for unconsciousness ? Hippocrates, in 460 B.C., the father of midwifery, whose teaching remained practically unaltered for nearly a thousand years, divided labour into two kinds—namely, natural and præternatural. W. Smellie, in 1779, made three

divisions : (1) Natural or unaided vertex. (2) Non-natural, aided vertex. (3) Præternatural, malpresentations. Robert Barnes in 1875 wrote of two kinds of labour : (1) Propitious, in which he laid stress on the absence of emotional disorder. (2) Unpropitious, difficult and complicated labours, with anxiety and dread as marked symptoms. I would like to make three divisions : (1) Normal or natural childbirth. (2) Average or cultural labour. (3) Abnormal or surgical delivery.

Divisions of labour have been recognised by the earliest observers ; there is little doubt that the normal or propitious were, in a high percentage of cases, entirely free from true physical pain. Some phenomena of labour may not have been clearly understood, and therefore mistaken for pain, as indeed they are to-day. But the old writings give the impression that natural labour was neither distressing nor difficult. Cases that are neither distressing nor difficult are uninteresting, and there is little reason to record them ; it is the præternatural, obstetrically exciting, that demands special attention. These are the case records that have tainted and flavoured the science, just as a bad egg in a cake will make the cake bad, and the other eggs, however good, are treated as if they had all been bad.

So the blind teaching has persisted, generation after generation, each respectfully following in father's footsteps since James Simpson, in January, 1847, first used chloroform in labour. His first case was a woman with a generally contracted pelvis ; she had already had one infant destroyed by a necessary surgical delivery. It was an abnormal labour and called for the humane and courageous experiment that Simpson performed. Since then there has been no division of labour in regard to pain. Obstetricians have been educated to believe that all labours are horribly painful ; they have made a routine of using some analgesic or anæsthetic, whether labour is normal or not. It has become the practice to disbelieve a woman who says it is not painful. The insistence with which anæsthesia is pressed upon women has caused much distress. Many women are more afraid of anæsthesia than of labour, and only succumb to the mask under the terrifying suggestion of what may happen if they do not " take it quietly."

I was lecturing a few years ago to a large county centre. The M.O.H. and other medical people were present ; some two to three hundred practising midwives listened appreciatively to my heresies. The silent nods of approbation from rows of old, experienced midwives became more disconcerting than the restless snorts of the medical men. I was amused and not a little puzzled. The explanation was forthcoming afterwards. The matron, whose brilliant

career at a London maternity hospital justified her appointment to the large maternity hospital of the county at an early age, rose to speak. She spoke with simplicity and a charm of manner that accentuated the sincerity of her revelation :

" I feel it is the moment to disclose a secret. For a long time after I became matron I failed to understand why so many women asked to be looked after by the nurses and not by the medical men who attend the hospital. I was considerably embarrassed by the situations which arose, and finally decided to inquire why the request was so frequently and so urgently made. The reply I had was astonishing, ' Because the doctors all make us have chloroform whether we want it or not, and the nurses don't ' " ! ! It was not because of the fear of anæsthesia but because of the absence of fear during labour that the majority of these women felt no need for analgesics.

My inquiries have led me to believe that this state of mind is more frequent than medical men realise. They do not expect it ; if they find it they do not believe it, and whether they find it or not a few whiffs of something must be given at the end—it is human and decent. They have never learned of methods for the prevention or relief of pain during labour, other than blotting it out ; they have never been given a chance to understand the truth of phenomena that they misinterpret. This has resulted in anæsthesia for all types of labour by all sorts and conditions of attendants. Claye writes in " The Evolution of Obstetric Analgesia " : ". . . in the last few years there has been a definite move towards universal obstetric analgesia in this country, helped financially and otherwise by the National Birthday Trust Fund and encouraged by the investigations of the British College of Obstetricians and Gynæcologists." So all the eggs are treated like the bad one ! Normal, natural childbirth, free from fear or gross discomfort, is treated in the same way as complicated labour demanding skilled surgical intervention.

Physiological function is complicated by the interference essential only in pathological states. The cultural labour is fundamentally a physiological and natural childbirth which had been rendered pathological by the imposition of unnatural emotional states.

Anæsthesia in natural childbirth is rarely desired by the woman, or justified, even on humane grounds.

Anæsthesia in cultural labour is given primarily to satiate the escape demand of fear. There is pain, but this is caused by the influence of fear upon the neuro-muscular harmony of the apparatus of dilatation and expulsion. A very small dose of anæsthesia numbs the receptors of emotional stimuli ; therefore, in this type, relatively

small doses inhibit the pain-causing factor, and, with the escape from fear, all pain disappears. Obstetric doses of analgesic and anæsthetic are much smaller than those required to overcome primary physical pain.

Anæsthesia in abnormal or surgical delivery has to be deep and constantly administered. The pain is real physical pain from laceration and excessive tension. The nociceptors for these harmful stimuli are provided by Nature to urge escape from injury. Science has provided that escape in anæsthesia and surgical procedure.

We must answer the question here : " Why not use anæsthetics and analgesics in all cases ? Is there any contra-indication ? " In short the reply is that no woman should be allowed to suffer pain in labour, and every method discovered or devised by science should be used to prevent dystocia.

If there is true pain, anæsthetics or analgesics should be exhibited at once, but absence of pain is the great contra-indication to the use of anæsthetics and analgesics. It is as great a crime to leave a woman alone in her agony and to deny her medical relief from her suffering as it is to insist upon dulling the consciousness of the natural mother who desires above all things to be aware of the final reward of her efforts, whose ambition it is to be present, in full possession of her senses, when the infant she already adores greets her with its first loud cry and the soft touch of its warm restless body upon her limbs.

Each of these two unforgivable errors are constantly committed. To tolerate suffering when it can be relieved is no less brutal than to insist upon suffering when it is not present. The end result of normal labour brings a physiological reward which is happiness and satisfaction too intense for adequate expression. The strain and violence of muscular effort is swept from a mother's memory by the sound and grasp of her new-born child. Women long for this moment. " I will have another baby as soon as I can ; I must live that divine moment again and again." This was said to me by a girl of twenty-two whose baby was only a few hours old.

The administration of anæsthetics and analgesics should have definite indication in obstetrics as it has in every branch of medicine or surgery. Pain is the only justification ; it does not matter whether the pain is secondary to fear or whether it is primarily physical. Natural childbirth has no fear and little discomfort, therefore few women will demand relief, and even fewer use the apparatus at hand for them whenever they may wish to take it. Cultural labour demands anæsthetics and analgesics to provide an easy escape for terror-stricken and tortured minds. These emotional states justify such relief, even though little or no pain is diagnosable.

The vast majority of these women are excellent subjects for natural childbirth, but their antenatal training gives them no education to combat the evils of misunderstanding. Like the early Christian martyrs they are hurled into the arena, naked and defenceless to be torn and mutilated by the wild beasts ; not lions, perhaps, to bring them to a violent end, but agonising fears which prolong the torture, until they too escape into unconsciousness. One brave man with a modern machine gun could have made short work of Nero's lions ; yet we, as a profession, withhold from these tortured women the machine gun of education and faith with which the forces of fear are completely destroyed. Till this supreme provision is made, the horrors must be blotted out by unconsciousness.

Anæsthesia and all its attendant risks are safer and more humane than the fear-pain syndrome of cultural labour which is accepted as normal by the great modern schools of obstetrics. When it is fully recognised that antenatal education can eliminate gross fear, anæsthesia will be indicated by the abnormality of unbearable pain.

When in " Natural Childbirth " (Heinemann, 1933) I called attention to the evil effects of fear upon women during pregnancy and labour, and stressed the urgency for an effort to combat this destructive force, a seed of humble origin was sown which has since grown to considerable stature. Seriously minded leaders of obstetric thought have become persuaded of the importance of this aspect of childbirth, and one or two text books have dared to mention in a vague way the existence, or the possible existence, of emotional influences. Andrew Claye, Professor of Obstetrics at Leeds University, in " The Evolution of Obstetric Analgesia " (Oxford Med. Publications, 1939) provides a good example of the type of criticism which is frequently made. He outlines the general principles of " Natural Childbirth," but hastily adds, " With much of what Read writes I am in agreement " (this refers to Chapter XX in Browne's " Antenatal and Postnatal Care "), " but *I question* whether the whole procedure is feasible for the average mother." He adds, " But the relief of pain by drugs is also a powerful means of conquering fear, and drugs are available which in my judgment provide a much simpler method. Incidentally, though the careful administration of drugs demands much sacrifice on the part of the doctor, it is probable that it is less exacting than the instruction in Read's technique, and that is a consideration to busy men and women."

Does this really suggest that had I ever been unfortunate enough to be busy I would have learned that the easiest, safest and simplest way to cure a poisoned mind is to poison the body as well ? If everyone accepted Claye's bald statement, " No anæsthetic is

given," there would be no material for Read's technique. With laudable control I reply that this is untrue. All women delivered are instructed in the use of an apparatus which is placed within reach ; they may use it at any moment if they have pain. In the absence of fear, pain is diagnostic of abnormality, and is relieved in this technique as it should be in all others—by suitable measures. Claye should have written : " No anæsthetic is accepted, when offered, by the majority of women so educated." That short remark did lots of harm. One lady wrote and told me that my name should be struck off the register ; such inhumanity was unbelievable in our enlightened age. A society whispered that I sat and watched women writhe in agony. A doctor who had intended to invite me to attend his wife wrote and explained that he did not think it quite good enough ! And so on. I feel sure that my learned confrère at Leeds will enjoy the joke with me, particularly since he has never given serious trial to my technique but prefers pernocton. He was more than justified in quoting Gauss, having ably criticised a method he had never tried out : " As with everything else in the world, the technique must be learned. Time and trouble, and again time and trouble, must be taken to master these methods." Gauss is right ; a certain amount of time and trouble is necessary if a practice is to be proved authoritatively to be good or not good. Criticism is so easy before trial.

I have referred to Claye's discussion because it is so typical of a drawer full of opinions that I have collected or received. There is not a single example of these critics volunteering the information that they have seriously applied this theory in practice. They believe in drugs and anæsthetics and therefore they continue to use them as a routine in all cases of labour. I do not ask them to wrestle, as I had to, for ten to fifteen years with a problem in order to find a solution that was obviously to be found somewhere. It is humbly suggested that the practice of these methods may be made for one year only, or upon fifty consecutive uncomplicated labours. Those who have done this are unanimously enthusiastic about their results. Then fair criticism can be made and the proper use of anæsthetics, amongst other things, authoritatively commented upon. When I read these outpourings of inaccurate deduction and dignified advice, the distant admonition of the football fan floats across my memory, as in years gone by its muffled howl reached my consciousness from the crowded stands on cup tie days. They knew what to do, but they had never tried to do it. When I read Professor Claye, a more vivid memory was recalled :

I was boxing in a heavyweight contest before a critical audience to which I was a stranger. We had just broken away from a clinch,

when a tomato hit me in the middle of the chest. There was a big crowd, and everyone laughed. For a moment I was furious ; it hurt frightfully ; it might have lost me the fight, but my opponent hesitated because he thought I had burst ! The " management," who was a beautiful tough, came to my corner and apologised : " 'Course, some of the lads gits a bit playful, but not them wot knows much abaht the gime." Old Whitechapel pros were often sound judges.

Of recent years much has been written upon the relief of pain in labour, and in order to arrive at the present position of anæsthesia and analgesia in labour, a considerable amount of reading has been necessary. Several outstanding facts have come to light ; the most significant of these is the almost complete absence of any authentic work upon the cause of pain in labour. In the introduction to Balme's " Relief of Pain " (1936), Sir E. Farquhar Buzzard writes : " He has not failed, however, to emphasise the eternal truth that the first essential in the relief of pain is a knowledge of its cause. . . ." Unfortunately, however, in the chapter on the pains of labour, Balme does not refer to the cause of pain in labour, but merely repeats the hackneyed observations that modern civilisation, artificial modes of living, and the heightened individual sensitivity to pain are the main reasons why the civilised woman has pain, whereas childbirth among primitive people is accomplished with comparative ease. He then proceeds to describe a variety of methods which may be employed in order to relieve pain.

Miss Lloyd-Williams, who is Anæsthetist to the Royal Free Hospital, London, wrote a small book on " Anæsthesia and Analgesia in Labour " (1934). She presumes that labour must be painful ; she makes no reference whatever to the cause of pain ; she overlooks, therefore, the first principle of medical science which is the removal of the cause of the trouble, but she proceeds to give a very able outline of the methods by which inhalation anæsthesia may be given. She enumerates fifteen drugs that may be given by the mouth, four by hypodermic injection, three rectal administrations and four intravenous.

Dr. A. L. Fleming, in the chapter upon " Anæsthesia in Obstetrics," published in the *Lancet* Extra Numbers No. 1 (Wakley & Son Ltd.), commences as an anæsthetist might be expected to commence : " Obstetrics presents a large and varied field for practice and observation for the student of anæsthesia."

At the British Congress of Obstetrics and Gynæcology in Edinburgh in 1939, Professor Chassar Moir opened the discussion with an interesting paper on " The Nature of the Pain of Labour." Practically the whole discussion, however, was confined to the

relief of labour pain, and degenerated into expressions of opinion upon the relative merits of the different drugs now in use. So an excellent opportunity for rooting out the cause of this evil was lost.

C. F. Fluhmann, in the Stuart McGuire Memorial Lecture for 1940 (Virginia, U.S.A.), stated : " The employment of anæsthesia and analgesia is now so universal in this country that it must be accepted as an established procedure. The question is no longer whether they should be used, but what can be done to make them safer. It is often stated that the ideal obstetric anæsthetic must (1) alleviate suffering ; (2) not interfere with the progress of labour ; (3) be safe for the baby. There is no such drug available, and some doubt must be entertained as to whether one ever will be found."

That, I think, is the most generally accepted attitude towards this subject of relief of pain in labour. It is probable that the large majority of practising obstetricians to-day agree with Fluhmann. But it is deplorable that such an opinion has been arrived at by hundreds of the ablest men in our profession, who must have spent in all thousands of hours by the bedsides of women in labour without having applied themselves to answer the most obvious of all questions—" Why ? " All the leaders of our science know that childbirth should be a natural function ; it is recognised that for some reason or other it has become painful, particularly amongst the civilised races.

Relatively few years back, Simpson applied a method of relieving that pain ; unwittingly he provided an excuse which has appeared to justify the absence of scientific research into one of the most obvious fallacies of culture. The assumption that labour must be painful is the means by which the modern obstetrician hides his own ignorance, and the general use of anæsthetics in labour is the method by which he says : " What I have neither the patience nor the wit to prevent I can at least avoid, although it is a little dangerous to mother and baby and may perhaps rob her of any reward, physical or spiritual, that nature is alleged to provide." It is, therefore, on the basis that some evil as yet undiscovered has been brought by civilisation into a natural function, that general anæsthesia for childbirth has become established.

It must be made clear once again that I believe most profoundly in the relief of pain in labour, and that when intolerable pain is present the anæsthetic of election should be used. It is wrong that any woman should be asked to bear pain which she is unwilling to bear ; no woman in labour should suffer greater discomfort than she wishes to endure for her baby's sake. But there is little justification for misunderstanding the phenomena of labour and

insisting upon the administration of an anæsthetic to a woman who has no desire to be unconscious of the arrival of her child. It has already been pointed out in previous chapters that by the employment of a certain routine, discomfort can be reduced to a minimum in a large majority of normal labours. There is an ever-growing fund of evidence that babies are being born into this country to-day to mothers who suffer little or no discomfort. I have found in medical literature records of hundreds of painless births reported by medical men. I know that the word " pain " when used in this sense demands careful definition ; it is not overlooked that pain is entirely a personal factor, but I suggest that it may be described as any discomfort that a woman is unwilling to bear, whether physical or psychical in origin. More women demand anæsthesia as an escape from fear than from pain. Fear, therefore, becomes an important cause for the administration of anæsthetics and drugs. Very few hours spent in education during pregnancy can eliminate fear, and experience has proved abundantly that the anæsthetic demand by those who have been taught to overcome the ravages of fear is less frequent and less urgent than those who come into labour believing, as Dame Louise McIlroy and Miss Lloyd-Williams believe, that pain is inevitable.

Those who advocate anæsthesia to all women in labour do so, I am sure, from the kindest and most humanitarian motives. There is good reason, for the obstetricians with whom they have associated not only teach that labour ispainful, but many of them believe it to be true, and most of them would hesitate to say that he had ever seen a baby born to a fully conscious mother. In fact, obstetric practice largely depends for its financial success upon the agony that every woman would have to endure if she were not anæsthetised.

Many of the most influential lay women in the " anæsthetics-for-all " movement have probably experienced painful labours or at least considerable pain in anticipation of the arrival of the obstetrician and anæsthetist ; therefore, there is every reason why such a movement should take its place among the great humanitarian projects of our time. The National Birthday Trust Fund for the Extension of Maternity Services is an organisation the primary object of which is " to undertake inquiries and experiments under medical advice which might point the way to the permanent solution of the problems of safe motherhood." I was given to understand that one of the most cherished ideals that its committee held was the provision of adequate anæsthesia for all mothers in labour. At first sight this might have been expected to have been received enthusiastically by all hospitals and nursing associations, for Minnitt's gas and air apparatus was made available by this fund

at a relatively small cost for all who wished to give anæsthetics in labour. I was astonished to hear from an official of the fund that the demand had been disappointing, and that money was available to supply many more to nursing associations throughout the country. I was asked why I thought such a situation had arisen ; fortunately I was able to reply from facts that I have gleaned when lecturing to many nursing associations throughout the country. The large majority of the women of the working classes do not want anæsthetic for normal labours ; the large majority of experienced midwives know that the pains of labour can be mitigated by other methods, and they also know that under our present organisation a doctor can be called in case of abnormality or distress, and he will bring his own anæsthetic. I suggested that if nursing associations knew their midwives were anxious to obtain the anæsthetic apparatus on purely humanitarian grounds, the demand might even have been in excess of the ability of this very wealthy fund to supply.

When I read through the list of the services of the National Birthday Trust Fund, I wished sincerely that one of them might have been an inquiry into the prevention of painful labour. I do not believe for one moment that a single member of that very distinguished committee was ever told that if all women were unconscious of the arrival of their babies, a large number of the poorer classes in particular would be deprived of the greatest and certainly the most beautiful spiritual experience of their lives. I do not ask anyone to believe this who has not seen a natural childbirth ; I need not ask those who have.

I cannot refrain from quoting a few lines from a story which I wrote for my children :

" It was the great chief Holosombo who believed that sleep for all was greater than perfect happiness for many with misery for some." I need not relate how this ambitious " Zulu " planned to obtain his ideal of perfect peace, but when at length the story has told of his schemes, it continues : " The voice of Holosombo was raised and all the warriors assembled and agreed that the cause was just. So according to custom, they stuck their mighty assagais in the ground, points outwards, around this precious thing. Upon each handle there was a name, and to each name there was a handle. This made the krail almost impregnable. Holosombo harangued the gathering, and thanked them for their presence and their help. Then they all bowed, and went away to do other things. It was very deserted when I called, except for two or three witch doctors who advised the Chief, and ran to his side when anyone important was seen approaching." The story ends with the loud but respectful outcry of the ordinary people of the tribe, who thanked their

beloved Chief for his kindly thought, but asked that they might be spared the mystic potion, for under its influence they would not see the sun rise ; they would not feel the cool dew upon their feet, or know the smell of the spring flowers. An ancient spokesman bowed his head to the ground before his Chief : " Oh, great and noble is the heart of Holosombo, who would give us peacefulness in sleep, but we, his simple folk, would rather risk the blessing of the God who gives us life and love."

But quite apart from the kindly but misguided intentions of any one organisation, there is a very influential movement throughout the country and a general trend of thought towards anæsthesia for all women in labour. It is a serious menace to the future of our race. Painless labour for everyone should be the great objective of all scientifically minded men and women. There is no doubt that many of our most accomplished obstetricians disagree with the " anæsthesia-for-all " outcry, but their hands are tied. The Professorial Chairs and senior appointments to hospitals rarely allow of action unhampered by outside influences. A standard and accepted teaching must be adhered to within certain limits, and with few exceptions the most eminent teachers have to conform to the demands of examinations and precedent.

The fact that such a movement is not only unnecessary but harmful is of no avail, for outside influences are brought to bear upon committees of hospitals particularly where committees have a high percentage of lay and influential people. It is astonishing what an enormous influence is exerted by relatively ignorant people upon the actual scientific and professional running of hospitals. This question of anæsthesia in labour is only one of many examples of exasperating interference moulding the thoughts and beliefs of a great profession. In good faith, junior medical men have carried this teaching to the ends of the earth ; they have neither the time nor the opportunity to band themselves into revolutionary organisations to refute the doctrine that their experience demonstrates clearly to be unsound. A number—and a much larger number than the academicians realise—have learned that anæsthesia for all is an absurdity and would be considered an imposition by a considerable percentage of the women in the country. " No woman should be asked to bear discomfort greater than she is willing to bear for her child's sake " is a practical, humanitarian and reasonable principle for all obstetricians to work upon.

Four young doctors have, during the last month, become fathers of four beautiful babies ; not one of their wives was anæsthetised. The idea of unconsciousness during labour is laughable to one and all of them. The happiness of those four young women is a joy to

witness, and, indeed, an infectious state. These medical husbands know the truth ; they, too, realise that the teaching of anæsthesia for all has somewhere a flaw which if persistently overlooked will not only cause great harm but will rob thousands of homes of the happiness that has swept with the warmth of a divine visitation through their own. Three of these women were under my care and studied the methods of natural childbirth ; the fourth is the wife of a friend and neighbour of mine who knows the truth of this teaching and practises it. No doctor attended his wife, but a sister in the maternity home in which we both attended our cases. His wife was a disbeliever, and had many friendly discussions with him upon the subject. She had confidence in him and submitted, in spite of her scepticism, to his wish. She is now a complete convert, and when I visited her with her one-day-old baby she was a picture of pride and happiness, in that she knew the truth and had not found Nature wanting in any respect. Surely, from doctors' wives such testimony is of even greater importance than from other women. "A prophet is not without honour, except . . " well, under certain circumstances !

In a more general consideration of drugs used in various ways to promote comfort in childbirth, certain important observations should be emphasised. There are three postulates laid down which must be satisfied by the perfect agent. It must (1) relieve pain, (2) not interfere with the natural forces of labour (3) be safe for the mother and baby. No such drug has been discovered, and it is unlikely that one will be found.

The whole question of pain relief in labour by anæsthetics and analgesics is in a state of chaos which would be laughable if it were not so serious. When we read the opinions of authorities from all parts of the world, as well as the experimental and clinical reports from those who are never likely to be authorities, we are lost in an incomprehensible tangle of words. I experienced a peculiar urge to uncontrolled mirth after ten days' intensive search for stability in this branch of our science. Walt Disney could hardly do justice to the Silly Symphony of Obstetric Analgesia.

I could only picture a crowd of men in white coats and large horn-rimmed glasses, seeking fame and fortune by the searching for a weapon with which to protect all women from an enemy which in 95 per cent. of cases did not exist, and their chosen method of protection was to risk the life of the woman and her baby by using the weapon upon them, not on the enemy which they erroneously presumed to be present ! It did not seem to matter how a woman was robbed of her consciousness, but the more awkward the means of administration or the longer the name, so much more likely was

it that fame might be achieved. Simple inhalation of gas, ether or cholorform was soon left behind. Drugs were put under the skin, into the stomach, into veins, deep into muscles, into the rectum, into the spinal cord, into the sacral nerves—in fact, anywhere that things can be put into the human body. Those who "did" a certain number by their own peculiar method wrote up the results, which appeared in big print in scientific papers as the latest improvement; they enlarged upon the absolute perfection of labour under its influence, its safety to both mother and child, and usually gave statistics of forceps deliveries, with maternal and fœtal death rate. The length of the names of these inflictions increased as the field of operations spread. Pentothal and thioethamyl (1) swept aside our old friend paraldehyde (2) which appears to be equally effective whether introduced from below or from above, but sodium prophy-methyl-carbinyl-allyl barbiturate scopolomine (3) won in a canter. After each report the phrase adopted is: "No harmful effects were noted in the mothers or babies." Joseph De Lee, in the 1939 "Year Book of Obstetrics and Gynæcology," makes an editor's note after this phrase: "(The last ten words are getting somewhat monotonous. Why are so many drugs offered? Why do they live so briefly?—Ed.)"

How long, oh, how long will this nonsense go on? Why do not at least some of these first-class brains settle down to try really harmless methods of preventing pain in labour? Can the scientific mind see no further than drugs and anæsthetics, or is the incidence of natural amnesia beyond their powers of observation? We know that deaths occur from the use of these things; we believe that undesirable results are produced by their use; harm to both mother and child is recorded by a large number of competent observers (4). What is the urge to persist in this search for an elixir to cure an ill which in the vast majority of women is preventable, with the utmost safety? And from another angle let the question be asked: How much discomfort is the purchase price of a woman's death (5) even if only two in a thousand? How much pain would a woman gladly bear if she knew that its relief meant respiratory embarrassment for her infant? (6).

Anæsthetics are used in place of education; drugs are an antidote for misunderstanding; the phenomena of labour are misinterpreted. A carefully introduced mental process will maintain the natural perception of natural stimuli, enhancing the health and happiness of the mother and the vitality of her child. Surely it is safer to introduce a mental process than a dangerous drug.

Science has been carried away by its enthusiasm; it has left common sense unemployed in the pain-relief problem. This whole

picture should be shorn of all excrescences. The indications for anæsthesia are not clearly recognised ; when they exist, the choice of anæsthetic should be made by an expert who can assess the danger to mother and child in relation to the unnatural occurrence that justifies deep anæsthesia.

Any discomfort that is overcome by the use of light obstetric inhalants can be avoided or relieved by mental adjustment combined with physical relaxation. This is not theoretical, but is the experience of hundreds of obstetricians and midwives throughout the British Isles. The mind is the perceptor and interpreter of stimuli ; it is in the mind that pain in normal labour exists. The best and safest anæsthetic is an educated and controlled mind ; the next best is the simplest means of rectifying false interpretation by the combined use of suggestion and light inhalation anæsthesia.

Let the obvious contra-indications to the teaching of anæsthesia for all be summarised :

(1) No satisfactory anæsthetic for all cases has been discovered (7).

(2) No anæsthetic is free from danger to mother or child (8).

(3) All narcotic agents are injurious to babies during birth ; they are all more or less severe respiratory depressants (9).

(4) In normal labour, properly conducted, a high percentage of women do not wish for anæsthetic.

(5) Anæsthesia essertially converts a normal physiological process into a pathological state with its attendant risks.

(6) Owing to the ease of the administration of anæsthesia, interference at birth is more common than formerly. " Thus it appeared that in a considerable proportion of uncomplicated cases in the Maternity Home, resort was had to delivery with forceps " (10). " A good deal of the instrumental delivery by doctors under modern conditions of medical practice is unnecessary, and this unnecessary interference has played some part in increasing the maternal mortality rate in Wales " (11), (12), (13).

(7) Anæsthesia prevents the occurrence of some of the natural phenomena of labour upon which the safety of both mother and child may depend.

(8) Anæsthesia, contrary to a woman's desire, robs her of the natural reward of a perfected function, and renders surgical an event which many women believe is the physical manifestation of a spiritual experience.

But in spite of all these contra-indications, and many others quoted by different observers, we must offer the least unsatisfactory method of pain relief, for no woman should be allowed to suffer greater discomfort in labour than she is willing to endure for her child's sake.

Attention has already been called to the importance of certain antenatal procedures as means of preventing painful parturition : Education, diet, exercises and physical relaxation. By the intelligent use of these natural adjuvants, combined with understanding of the phenomena of labour, pain can be entirely eliminated from labour in a large number of cases. It would, however, be unwise to presume that such measures are always adequate. A certain percentage of women, owing to their physical, nervous and psychological pattern, would suffer pain of great severity, even in normal childbirth, if left uncared for and untreated. Physically they may present the necessity for hard work and patience combined with poor muscular and skeletal development, not sufficiently marked to constitute abnormality, but enough to create difficulty which is incompatible with their temperament. Their receptors may be highly sensitive ; the cortical control of thalamic impulses may be low ; the interpretation of stimuli may be inaccurate owing to the presence of emotional states which education has failed to rectify. There is reason to believe that some women are more directly subjected to phylogenetic influence than others, and such influences are less amenable to education than the purely ontogenetic. This applies particularly to the " fear-pain " combination firmly established in that part of the brain which should be amenable to the laws of argument or reason.

The belief in pain during labour is so absolute in some women, and their reactions to the smallest and earliest sensations of labour are so demonstrative of true physical pain, that I have been forced to speculate upon the possibility of innumerable generations of their forbears suffering in childbirth. Have certain strains, owing to phylogenetic association of pain, fear and labour, developed a state comparable to a conditioned reflex of pain at the thought of labour ? On several occasions, acute dysmenorrhœa has been cured by unravelling the " pain-fear-childbirth " mental group, although more girls have been cured of this distressing condition by a simple conversation upon adult life which revealed some ignorance or misunderstanding. On two occasions dysparunia has been quickly and completely cured in young brides who knew nothing of childbirth, but when faced with its possibilities found an inherent horror of their own natural function, although they both wanted—and now both have borne—children.

Such women demand anæsthetic in labour, and should be given it, but surely the opportunity should be taken to relieve their minds of the errors of persuasion that are responsible for the pain-causing series of events.

It is here that I must emphasise again the importance of using the

greatest and most harmless anæsthetising agent that we have—that is, suggestion. I can hear the wail of lamentation rising, like CH_4, from the bogs of orthodoxy that such a word should pass the pen of a serious man, but never more serious in the cause of motherhood than when I demand that all obstetricians should become acquainted with the power of this weapon in our hands. I do not for a moment expect the average anæsthetist or physician to appreciate the full meaning of this much abused term. Even to-day it is the ultimate explanation of the ignorant man for phenomena he wishes to appear to understand. Every good physician depends for success upon correct diagnosis, his patients' faith and his conscious or unconscious powers of suggestion ; medicine and other treatments are adjuvants to suggestion in at least 70 per cent. of cases. For unquestionably persons still recover from quite serious conditions in spite of treatment ! Every anæsthetist of experience knows the efficacy of quiet suggestion, whispered, it may be, in his patient's ear during a peaceful induction. The difference between a good anæsthetist and a bad one often depends upon the use of suggestion. This must not be mistaken for hypnosis ; it may be that the basis is the same, but the depth of influence is different, for whether the conscious brain of woman is filled with pain-fear images by phylogenetic influences or by more recent communications, the fact remains that rarely, if ever, is the subconscious mind of woman able to influence the normal course of labour.

Suggestion can be most easily applied by securing inhibition of the conscious brain, and firmly but quietly offering to the subconscious the required instruction. The subconscious, not being subjected to the trials of discretion, reason, discrimination, argument or logic, accepts blindly the statement made, and so long as interference by the conscious brain is kept out, so long the " suggestion " maintains power and action.

In labour this is very easily done for several reasons. In the first stage, if relaxation has been well and truly practised, the uterine contractions are practically painless, and very few women need help either by suggestion, drug or analgesic if their fears are destroyed and they have a calm understanding of the conduct of their own labour. The last half-dozen contractions before full dilatation may be uncomfortable, but the knowledge that they are the harbingers of the next and final stage, and are not likely to last long, enables most women to accept them with little ado.

In the second stage of a controlled and relaxed labour, there is a most obvious lowering of the activity of the conscious brain. I have drawn attention to this many times, but its importance is so great in relation to the administration of anæsthesia that I must mention it

once more. Many women remember little or nothing of the second stage of labour; the bearing down, groaning and sleeping are a series of reflex events; they arise from the instinctive layers of the brain; they obey Sherrington's Law of Reflex Action, and they arise from impulses following the law of the "Common Path"; they perform best when the conscious, reasoning inhibiting brain is put out of action. It is my belief that the partial consciousness of the second stage of a normal labour is intentionally produced by the law of Nature to allow of instinctive expulsive activities unimpaired by reason or discretion. It accounts for the freedom of nakedness, the natural woman, careless of all but the immediate occupation. It is the "subconscious" woman whose second stage is hard work and persistent effort; it is the subconscious woman at whose fortitude we marvel because we estimate her behaviour in terms of her conscious brain activities. Her violence is reflex, without reason; her language may not be discriminating and her behaviour not always discreet, but how susceptible to suggestion, if she is well and properly controlled! The suggestion is truth, and in conformity with fact, and is therefore accepted easily. We have not to inflict falsehood upon the subconscious of a woman in the second stage of labour; we may quietly assure her that she will work with a will and not be afraid; she will be comforted by her efforts and not hurt; she has strength and all is well.

The most difficult sensation is that which some women experience vividly—the imminence of pain. It never comes to pain unless active resistance is made at the outlet, but it feels so desperately near and such a severe pain that they are awakened to true consciousness. Then reason, fear, argument, etc., all sweep in to the picture and inhibit the normal instructive activities of the subconscious. But why should the conscious mind of woman bring distress when the subconscious allows peace and relaxation between these violent contractions? Why should pain replace hard work, and terror quiet determination? It is "suggestion." The obstetrician who scorns the use of mental reinforcement has overlooked that by his actions, thoughts and sympathies he has unwittingly applied the most powerful suggestion. During pregnancy he has searched for abnormalities; he has suggested the possibility of illness and danger. By his promise of drugs and anæsthetics he has introduced the belief in their necessity, and therefore he has suggested that pain must be borne. By his manner he has conveyed that he is her guardian against the assaults of mysterious and harmful eventualities. The drama of labour is awe-inspiring to the average woman who has not been educated in the conduct of her own parturition. The whole atmosphere of some maternity homes is a potent agent

of harmful suggestion—the labour ward, its polished furnishings, the instruments in scintillating readiness hanging in glass cases before the woman's eyes—suggest that this is no simple affair. The mask, the gown, the rubber gloves, expectant searchings down below and quiet steps, awaken in a woman's mind a host of fears and doubts. If she has not been warned or instructed in the wisdom of precaution she presumes, and not unjustly, that the climax of all this must fulfil her worst and most vivid mental imageries. So she becomes tense in mind and in body, and firmly believes the stories of her friends ; she knows that labour is the hell that posterity has promised her it will be. Her conscious mind remains alert, and her body misinterprets its sensations. Finally, these false suggestions are blotted out by anæsthetics and drugs, but still they overrule the physical influences of truth. Obstetric analgesia does not relieve the tension of the body ; resistance and rigidity of the outlet persist if the induction is made whilst fear is present. So labour is slow and progress so unsatisfactory that mechanical obstruction is diagnosed and forceps employed ; the unrelaxed, though fully dilated, cervix is torn, the vagina lacerated and the perineum ruptured. The suggestion of pain, trouble and danger had seeped deeply into the subconscious ; it had become an accepted fact because the falsehood of her teaching had not been contradicted.

If anæsthetics are required to circumvent the prevalent influences of false and harmful suggestion, why is the use of true and helpful suggestion, in order to avoid anæsthesia, tabooed ? The truth of natural labour is that there is no pain greater than healthy women are willing to bear. That is why women in labour are so susceptible to suggestion, if their antenatal education has enabled them to understand, and prepared their minds for a natural function.

Thus, education is largely concerned with protecting women against the evils of false suggestion, and natural labour is conducted with the help of suggestion as a means of infiltrating the subconscious with truth. If those who attend women in labour view helpful suggestion with disfavour, must they continue to inflict strong and harmful suggestion upon women who would be willing to accept the truth ?

I do not know the cause of that state in the second stage which dulls the conscious brain, but from watching closely all the signs and symptoms the first thing I should like to investigate would be the oxygen metabolism. The enormous muscular exertion must produce chemical changes altering CO_2 oxygen and lactic acid balance. On these lines the nature of the second stage of labour anæsthesia can be explained. Very small whiffs of nitrous oxide and air often increase the effectiveness of labour, and although not

producing unconsciousness, allow of perfect suggestibility. It is not the nitrous oxide effect so much as the lowering of the percentage oxygen intake (14). It is upon sub-oxidation that the conscious brain fades out, and the instinctive reflex activities of the subconscious are made free to act; then the relatively small doses of all and any form of anæsthetic during the second stage that produces the desired result is adequately explained.

The ideal anæsthetic state, during labour, is the subconscious, not the unconscious. This is frequently present as a natural process in normal labour, and demands understanding, not narcosis. If, owing to a variety of factors, it is interfered with by the conscious brain, then a minimal inhalation of nitrous oxide and air is sufficient to produce a state of easy suggestibility in the mind of the woman educated in labour. The receptivity of the subconscious to suggestion of its own instinctive reflex activity is unimpaired.

The birth of the child awakens a mother to the discriminating activities of the conscious brain, and the metamorphosis, so beautiful and so sudden, of which I have written frequently, is not a leap from narcosis to lucidity, but a normal design of Nature; the reflex subconscious having performed its task, the full and conscious recognition of the glorious fact of accomplished motherhood floods the mind. This calls for strong sympathetic impulses which bind the tired expulsive muscles of the uterus into a firm anæmic bundle by the contraction of the circular fibres. It is the absence of this natural sympathetic nerve stimulus which in the main predisposes deeply anæsthetised women to postpartum hæmorrhage. Nitrous oxide in excess actually alters the coagulability of blood, and has that added disadvantage. But it should never be pushed as deeply as that, or used as long, for if an abnormal case is being treated, it demands all the care and specialised anæsthetist's attention of a serious surgical operation. No one should be allowed to give the casual whiff so often heard of for an obstetric operation; it demands a good anæsthetist as much as any other surgical operation.

In discussing obstetric analgesia and anæsthetics, the difference between analgesia in normal or cultural labour, if any, and the anæsthesia necessitated by surgical delivery or interference, should be made quite clear and unmistakable. Claye (15) considers the careful administration of drugs "less exacting than the instruction in Read's technique." With all respect, I wonder how he learnt that. I have tried both methods, and find drugs more exacting, more uncertain and less satisfactory. The women under my care have no doubt which they prefer, as will be appreciated when the personal observations are read.

Professor Waters and Professor Harris (4), of University of

Wisconsin Medical School, write : " We would admonish the practitioner not to forget that ether, chloroform and nitrous oxide combined with appropriate mental suggestion, have in the past, in the hands of those skilled and experienced in their use, offered great satisfaction and safety to many mothers and children."

Professor Joseph De Lee (8), of University of Chicago Medical School, writes : " While I have not used pure hypnotism very often I have used suggestion a great deal, indeed almost constantly, and I am irked when I see how my colleagues neglect to avail themselves of this harmless and potent remedy. It accounts for easily half of the success of local anæsthesia."

I am honoured to offer to these world-famous men a physiological justification for their recommendation of suggestion, and an explanation of the phenomena of the second stage in relation to anæsthesia.

The modern trend of thought which is guiding the oncoming generations of obstetricians requires a wider view and a more courageous initiative. It is, as it stands, largely moulded by public opinion, and what the ladies of the West End desire must be provided if some of our teachers are to earn an adequate living. So long as obstetrics is practised for fees its development will be stunted by the influence of ignorant but unavoidable forces. Most of the so-called advances in obstetric anæsthesia have been made by anæsthetists—not unnatural in a way, but a friend of mine whom I consider to be among the great anæsthetists of all time, referring to my practice, said, " It may be right, Dick, but if everyone believes it I shall soon be out of a job " ! ! Who can blame him for preferring anæsthesia for all ?

The perfect painless labour will be attained, but not by the administration of drugs and agents to destroy consciousness. By careful and patient investigation of the phenomena of labour, observations will be made from different aspects. Chemical, neurological, psychological, mechanical, electrical and even metaphysical facets to this physiological gem will flash some new message to those who care to look, and in time these varied observations will be correlated and sifted until the truth of natural painless labour is obvious to all. That truth will not be found either in drugs, analgesics or anæsthetics alone.

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(2) E. D. Colvin and R. A. Bartholomew. *Internat. Clin.*, December, 1938, 4, 191, 201.
(3) Frech, Volpetto and Torpin. *J.M.A. Georgia*, April, 1939, 28, 147–153.
(4) Waters and Harris. *Amer. Jour. of Surgery*, April, 1940, pp. 129 134.

(5) JOSEPH DE LEE. "Year Book of Obstetrics and Gynæcology," 1938, p. 141.
(6) YANDELL HENDERSON. *Amer. Jour. Obs. & Gyn.*, March, 1939, 37, 521–522.
(7) ALECK BOURNE. "Synopsis of Obstetrics and Gynæcology," 1937, pp. 99–100.
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(8) JOSEPH DE LEE. "Year Book of Obstetrics and Gynæcology," 1939, p. 164.
(9) JOSEPH DE LEE. "Year Book of Obstetrics and Gynæcology," 1939, pp. 167–168.
(10) "Report on an Investigation into Maternal Mortality," Ministry of Health, London, 1937, p. 183.
(11) "Report on Maternal Mortality in Wales," Ministry of Health, London, 1937, p. 118.
(12) MONTGOMERY. *Jour. Amer. Med. Assn.*, May 15th, 1937.
(13) BUNDESEN, and others. *Jour. Amer. Med. Assn.*, July 25th, 1936.
(14) S R. WILSON. "Physiological Basis of Hypnosis and Suggestion," *Proc. of Royal Soc. Med.*, Section Anæsth., Vol. 20.
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CHAPTER XIII

EDUCATION IN PREGNANCY AND LABOUR

THE instruction of women in the facts of pregnancy and childbirth is, as has already been pointed out, of great importance. Time after time I have heard the same story: "I didn't understand what was going on, so quite naturally I was worried." There is little doubt that most women are not only willing but anxious to learn what happens inside them when a baby is coming. It is not necessary to go into physiological detail, but to give a general and concise account of the process of development. If the story is gradually unfolded as the months go by, its interest increases, and a logical reason may be given for any treatment thought to be advisable. The startling ignorance displayed by many women soon makes obvious the necessity for simplicity.

The criticism has been made that a woman becomes introspective if she is given a little knowledge, and therefore that it is a bad thing to do. The reply is that experience shows that the woman who does not know a few elementary facts is more likely to become centred upon herself. She has no confidence in her changing state because she cannot understand why it should be so, and thinks of all rational and irrational possibilities. These people frequently come to the conclusion that something must be wrong, and symptoms which arise from anxiety and disturbed nervous harmony actually appear to justify these conclusions. A further objection to giving instruction to patients is that life is not long enough. The busy man is more concerned to know that all is as it should be than that the woman should understand. It is true that where great confidence in the medical attendant exists it may be quite sufficient for him to say, "All is well; come again in a month." But this does not apply to all women. They may be reassured and, for the time being, happy, until some fresh condition arises which is disturbing. On the whole women are inquiring creatures but frequently too timid to ask plain questions about things which they fear, in the back of their minds, may appear to the doctor to be foolish.

Let us consider the early months of pregnancy. Presuming that the patient has not previously talked to her doctor about pregnancy, or that she has not intelligently studied certain books on the subject, she is unlikely to ask to be told details of the processes occurring within her.

*If she has menstruated regularly and finds that ten days or a fort-*night have passed since her period should have arrived, she probably suspects that she may be pregnant and, according to the desire to have a baby, so, sooner or later, she visits a doctor. The first visit, as previously remarked, is extremely important. If the menses are more than ten days overdue and accurate diagnosis difficult for any of the many reasons that may give rise to uncertainty of early diagnosis, an Aschheim-Zondek or some other similar test of the urine should be done. The second visit is easier, and should be made within a week, not only to hear the result of the test, but to take the opportunity of a few minutes' conversation. Pregnancy means morning sickness to some women, and the knowledge of that state acts as a conditioned reflex ; they have heard that it is one of the signs of pregnancy and believe it to be a necessary accompaniment. They therefore start to have nausea and even vomiting as a subconscious justification of their state. It is Pavlov's story over again—the association has become so definite from hearsay that the thought of pregnancy produces reflexes long conditioned in the mind. On two occasions women whose menstruation was overdue have consulted me about their pregnancy because of morning sickness, nausea, loss of appetite and weight. Neither was pregnant, and their symptoms cleared up as soon as they knew for certain that it was so. It was not the meal that made the dog salivate, but the bell that heralded the meal ; in these two cases it was the " bell " that produced the vomiting although the " meal " was not there at all. How much rather, then, will the bell—which in this case is the correct assumption of pregnancy—cause the salivation—which is the nausea and vomiting—when the meal is really present ?

Conversely, it is frequently observed that the girl who does not know that she is going to have a baby does not have any of these symptoms. Obviously, this does not apply to all women who vomit, but to a surprisingly large number. They should be clearly told from the outset that nausea is not physiological and that healthy women do not vomit. It should be pointed out that the stomach should neither be empty too long nor overfilled ; consequently, small frequent feeds are advisable until all tendency to nausea disappears—very dry toast, charcoal biscuits, peppermint creams, can be carried in the bag. Some find fruit best of all. Only recently a lady pulled a banana* out of her handbag as she sat down in my consulting-room, and said : " Excuse me, but I'm due for my banana ; if I don't have it I shall be sick." I inquired whether she felt sick, and was told that she didn't but that she was quite sure she would be if she did not eat at once. If advice can b

* This chapter was written when bananas were still available !

given to prevent or stop early sickness, a great step has been taken to gain the woman's confidence.

At the eleventh to thirteenth week, complaint is often made of frequency of micturition. Perhaps the uterus is not quite clear of pressure at the brim of the pelvis ; it may be slightly or completely retroverted. A vaginal examination at this time will not only afford opportunity of relieving her of frequency, but by lifting a uterus which hesitates to rise above the brim, morning sickness may be completely cured.

By this time a woman should have been told that her uterus is a muscular bag that is attached to the upper part of the vagina. It has a shape which resembles a rounded pear, and the stalk end is the neck. This neck remains firmly closed whilst the baby develops inside. As the pregnancy advances, the uterus grows in size to accommodate the baby and the apparatus for feeding the baby.

Certain forms of food are best, and other things are possibly harmful. I always advise that smoking should be stopped and no alcohol taken during pregnancy. It is interesting how many women lose the desire for both these habits at about three to four months.

The vicarious changes of taste and smell, and even sight and sound are a cause of great concern to some. Those who have smoked suddenly find themselves unable to feel comfortable in a room with their husbands if they are smoking. Others take a strong dislike to the smell of cooked meat. These changes—which are found in some cases to be due to a forgotten association—may be the cause of considerable anxiety if they are not discussed and their importance minimised.

Before the baby quickens the mother should be warned of it. She should understand that the first faint throbbing or regular tapping are movements of her child exercising its muscles and of its own initiative taking part in the perfection of its development.

The child becomes a reality at this stage, and if the fœtal heart can be heard clearly I give the mother a long stethoscope with a broad tambour and, if she wishes, enable her to hear the child's heart beat, explaining that it is now about ten inches in length and weighs about ½ to ¾ lb. Some women have complained of a disturbing regular throb in the uterus which goes on for half an hour or even longer. The possibility of the baby having an attack of hiccoughs interests the mother and gives her a sense of the reality of the child. Ahlfeld ("Lehrbuch der Geb.," 1903, p. 44) gives observations of his investigation on this phenomenon which appear

to justify the assumption that fœtal hiccough is the cause of this particular sensation.

Some time during the first few months the question will probably arise as to the rights and wrongs of coitus during pregnancy. This is a difficult subject. Purely physiologically, there is little doubt that it should not take place at all, but the physiological functions are not adhered to in civilised married life. In that sense it is probably no less wrong than contraception, for each is an offence against the laws of Nature. But there are certain serious dangers incurred which, when advising on this matter, must not be forgotten. Coitus may, and undoubtedly does, cause abortion, not only from physical disturbance of the uterus, but from contraction during the orgasm as well as suffusion and congestion of pelvic blood vessels. There is also the probability that some absorption occurs from the vaginal mucosa which disturbs the hormonal and chemical balance of pregnancy.

If a woman dislikes the idea of coitus but allows it in the belief that it is her duty to her husband, then serious nervous derangements may occur. This may become so repulsive that, as De Lee writes in his " Principles and Practice of Obstetrics " : " In some cases the presence of the husband invites an attack of vomiting, and removal of the patient from home may be necessary." Another danger is from infection if it takes place in the later months of pregnancy when the cervix is loose and opens easily, allowing the uterine cavity to be unguarded against the introduction of infected material. Many cases of this have been recorded. It is not without interest that primitive people consider it a crime and dire punishments are meted out to offending males.

It is said that animals do not copulate when pregnant. I am not persuaded of the truth of that. In the later stages of pregnancy it may be true, but male rabbits, bulls and rams do, and certainly the impregnation of hen birds does not protect them from the constant attention of the cock.

Yet another aspect must be considered. Many women only desire their husbands when pregnant, and in young people the bond of approaching parenthood often stimulates an irresistible affection which results in frequent and delectable copulation. I have heard it said that for the first time since marriage coitus has been carefree. By accident the wife became pregnant, and since it was so, no romance-destroying measures of contraception were necessary, The act was natural and without anxiety and was only pleasurable under those conditions. Danger or no danger, such people will be persuaded with difficulty to refrain.

A wife's sense of duty is important. Many women feel truly

sorry for their husbands, and although they have no desire themselves, will not hesitate to demonstrate their willingness for their husbands' sake. When we have heard of the attitude of some husbands to their wives at this time, we can easily understand the fear that many wives have of forcing the husband into unfaithfulness. One woman who was adamant upon the undesirability of coitus whilst her children were coming told me that, as a reprisal, her husband had introduced his mistress into the house so long as she refused to cohabit with him. Whether it is in the home or out of it, many women have considerable anxiety for the celibacy of their husbands when they themselves are not available. In Nature this does not occur, but in culture more frequently than is generally recognised.

A candid and sympathetic discussion of this subject is often a great relief to a young wife. My own advice is that during pregnancy a wife should have the right to decide whether or not coitus takes place. If she has a strong desire during the early months and an understanding husband, then a gentle performance of the act under the urge of affection is unlikely to be harmful. If she has no desire, she should not be molested, for molestation it amounts to. To a right-minded man, celibacy during his wife's pregnancy should be no sacrifice, but rather the least service he can render her for her child's sake. The risks are told and the dangers of violence emphasised, and the warning that discomfort in the abdomen or pelvis, or fulness and bursting feelings in the thighs afterwards, should be considered definite contra-indications to repetition.

Should this intimate question arise early in pregnancy, it will not be difficult to discuss quite freely any doubts or anxieties arising in the mind of the expectant mother. The attitude of the obstetrician should be that of an impersonal but approachable oracle. It is for this reason that it is best—in private practice—to arrange a fee inclusive of all visits during pregnancy as well as labour and the puerperium. It leaves a woman free to see her doctor when and as often as she wishes, which is a great comfort to many. At a chosen moment, it is my practice to point out that I want my patient to know everything she wishes about childbirth, and any questions in her mind should be put to me until the point is clearly understood. " I am far more concerned that you should have no doubts or fears in your mind than I am about your health. You are a perfectly healthy girl doing a perfectly natural thing. Your body is much less likely to mar your happiness just now than your mind is. If you cannot remember the various things you want to ask me, write them down as they come to your mind ; we can probably settle them in a very few minutes. I am here to watch your physical

development, to guard you against ignorance and misunderstanding and to be an adviser upon all subjects directly concerning your baby's arrival in a natural and healthy way."

Not infrequently, if the spirit of the occasion is suitable, some phrase is added to allay the self-consciousness lest I might think some of the questions foolish. Many women, I repeat, do not ask questions because they feel they ought to know the reply, and feel foolish to mention a simple, but to them perplexing, subject. "Talk to me about it," I have frequently said. "We can say a lot in five minutes and you are not wasting my time." And that is true. Blood pressure, mensuration, hæmoglobin, urinalysis and abdominal examination can be conducted inside fifteen minutes if the consulting room is well organised. In an antenatal clinic, where the work is probably divided, five to ten minutes per patient is the maximum required for full routine examinations. It gives time for conversation which, if it leads to important matters, can be prolonged.

But it is not the time that matters ; it is the personal relationship, the friendliness of greeting, and the gentle care in examination that breaks down the barriers of shyness. Kindness can be dispensed as quickly as first aid, and a good deal more effectively, because its relief is permanent. Sympathetic understanding of troubles, both physical and mental, is an inexpensive application which often lifts a load of weariness and worry. Instruction can be imparted without intellectual domination, and education without impressive superiority.

Women are receptive at this time and should be quietly guided to become interested in details. It is their job in life and it is their great privilege. They are conscious of the naturalness of childbirth, and they are more often astonished that troubles should occur so frequently than that an increasing number are having babies without trouble.

Pregnancy should be as normal for a woman as wage earning is for a man. Because civilisation has allowed a vast number of men and women to be out of their instinctive employment, it must not be accepted as part of the natural law. Women realise that they are fashioned for bearing children and that ages of development has made reproduction a simple function in all undomesticated animals. The ties and teachings of culture have shaken their faith in the fundamental faculties, but they receive, with a sense of relief, the truth from an authoritative source.

What replies will a physician get to the question : "Why should you expect trouble or difficulty?" He may be told : "Well, everyone does have trouble," or "Why should I be different from my friends?" It is usually sufficient to inquire if the friends

PLATE IV

A

B

X-RAY PHOTOGRAPH OF A CHILD AT THIRTY-FIVE WEEKS

(A) Vertex presentation—correct position

referred to were taught about or allowed to have natural births. If not, their experiences must be discounted. They should be told that as time goes on they will be taught how to assist Nature when the baby comes. They will not unconsciously suffer the cultural counterfeit which ignorantly displaces the natural law. Ignorance not infrequently disguises itself under the cloak of applied science. No obstetrician need hesitate to tell his patients that the pain of labour is a grossly exaggerated story. There may be none at all; there may be some discomfort, but if by any mischance pain occurs, there are means by which it can be almost instantaneously relieved.

Many other questions—quite apart from troubles—may arise, such as: "What shall I eat?" * "What clothes should I wear?" "What exercise may I take?" * All these matters are discussed in modern text-books, but to maintain the most helpful mental attitude I have reason to advise in most cases very little, if any, red meat, but proteins from fish, cheese and fowl, and one and a half pints to two pints of milk a day, which does not tend to increase the weight abnormally if the diet is reasonably balanced. The personal element is one which must be taken into account when discussing diet. It is very difficult for a working woman to prepare one meal for herself and another for her husband. Many of my patients have done very well on vegetarianism, both strict and with reservations. Cyril Pink, in "The Ideal Management of Pregnancy," puts forward some views which have many good points and which are worthy of careful and prolonged trial. I have noticed a distinct difference in the mental attitude and physical conduct of pregnancy and parturition between vegetarians and heavy meat eaters. The former, in my opinion, give uniformly better results. But that must remain a matter of opinion until sufficient evidence—which includes all other influences—has been obtained from a large number of sources.

The clothing must be noticed and advice given to prevent strains and stresses being applied which may be harmful either to the baby or the mother. A girl should have a better figure and be more attractive to her husband after her first baby than before. The care of the skin over the abdomen and thighs should be referred to, and the correct position of the breasts. Nearly all women who feed their babies lose the shape and firmness of their breasts. This is a serious error. There is no necessity for this deformity, and yet few obstetricians seem to realise the mental effect of long, pendulous breasts. A woman who has been subconsciously proud of her shape cannot feel her personal sense of attractiveness if she has to pack away under tightly fitting brassières two pendulous appendages

* The author's diet for pregnancy is given on page 128 and adequate antenatal exercises on page 127.

which, when unsupported, hang down to her waist. If a suitable garment is worn from the time that new breast tissue starts to grow, the distance from the nipples to the manubrium sterni can be kept constant. The shoulder straps should be one-inch ribbon, and at right angles to them, on the brassière, an adjustable band from one side to the other, preventing the breasts from swinging into the axilla. Thus, two forces at right angles are exerted on the breasts, and the line of resolution of those forces is approximately from the nipple to the manubrium sterni. It is comfortable, it can support without any flattening, it also takes the heavy drag from the shoulders and not only allows a free, upright carriage, but allows of unrestricted breathing, and obviates the upper backache and shoulder ache so often complained of. Several firms in London have made brassières to this pattern for my patients, and at least one West End shop has adopted it as a standard brassière for maternity wear and for women with large breasts.

The maternity belt or corset will be referred to when backache is discussed.

These things enable women to avoid the absurd humility that is so prevalent about their shape in the latter months of pregnancy. It is a state and an appearance to be proud of, and if they are noticed to be " great with child " they are envied by more women than will own it. A woman who despises another who is pregnant does not deserve the privilege of childbearing. The early Victorian idea of its obtrusion being unseemly in polite society was prompted by the unwholesome prudery which sanctioned the prostitutes' parade in our large music halls. All classes of society should honour and be proud of pregnant women. They are at least doing the most beautiful thing God made them for.

It is in this vein that the whole teaching and instruction of pregnancy should be conducted. It is a normal and natural function ; it is essential to the race, the nation, the community and the individual. It is a whole-time job with an ultimate reward out of all proportion to the personal limitations and sacrifices incurred. It must be taken seriously, though not grimly. It is of supreme importance and should be accorded a position of dignity and respect. In the natural law it is the perfection of womanhood in the great design for continuity of the species. It is the objective of the strongest emotional experiences of human nature. It is the acquisition of woman's most treasured possession and her initiation to an estate of unqualified delight. Pregnancy, free from anxiety and fear, is characterised by a profound urge for a fuller and more lucid knowledge of the spiritual forces of life. Women have spoken of an incomprehensible elation, a sense of inner rejoicing, that

sweeps them away from mundane realities to new worlds in which for days on end they live a life of physical and mental exaltation. Mere man is rarely sensible of the irresistible emotional transformation that underlies natural pregnancy. For him, love has meant aspiration, adoration, acquisition and possession; the zenith of his success has been impregnation. So far he shares with woman the biological sequence, but she goes on. For her the culmination is not being possessed, but possession of that which is of love itself. Her child is not only the biological result of a physical union, but the spiritual manifestation of the underlying forces of her existence. This absolute power is the influence upon which the development of the race depends. The most despotic rulers the world has ever seen have been helpless before its intensity. Kings and commoners, princes and paupers alike have been willingly subjected to its laws. Four hundred years before Christ, Plato saw clearly its potentiality when he wrote: "I think men entirely fail to discern the power of Love, for had they discerned it they would have built Love immense temples and altars and offered him immense sacrifices."

In pregnancy uncomplicated by inhibitions and anxieties, this, the greatest of all forces to which a human being can be subjected, exerts its maximum influence upon a woman's mind. It can only be laid bare when the fears born of ignorance and misunderstanding are dissolved by education. Fear is the portcullis through which even truth cannot pass; it is so impenetrable that beauty can neither be seen nor sensed between its bars.

By education, this barrier can be partially or entirely surmounted, according to the receptivity of the woman. By education no active principle can be added, but negative influences or inhibitions may be removed to allow the waiting forces of the natural law to perform their task unhindered.

Thus it is that the attitude of the obstetrician towards pregnancy, the ability to promulgate the principles of his teaching, and the desire to maintain the dignity of motherhood, are the pillars upon which the integrity of his instruction depends. There is no academic rule which can be applied to all without discrimination and discretion. Each woman presents signs and symptoms, both mental and physical, which demand adjustment or rectification if at variance with the standard of "normal" accepted by the physician. Diagnosis of woman is as essential as the diagnosis of obstetric complications. Some diseases are incurable, but many react to therapeutic interference. Some women are unapproachable, but many reach out to grasp the truth that they have felt, but feared to believe.

When I write in these terms of childbirth and antenatal education,

I am fully aware of the criticisms that are invited. Amongst my friends are great obstetricians who were students with me—men whose work has been a stimulus and inspiration and whose ethical standards are beyond reproach. They have known my views and persuasions for years; they have laughed with and at me. True friends in science withhold neither praise nor derision when it is honestly indicated by their beliefs. As in the ring in our youth, so in later life: the better performer our opponent is, so much more careful in attack and defence we become. But as long as all is in accordance with the rules of the game, friendliness and mutual respect increase; we delight in the smacks that show up our weaknesses, and chortle at the cracks that send our adversaries back on their heels. The contest is not for personal glory, but to the end that some benefit—however small—may accrue to the science that has become our most absorbing purpose. No one knows everything and everybody makes mistakes; a scientist has not started to learn until he knows enough of his special subject to realise his appalling ignorance. Obstetrics is a jewel which is incompletely cut, yet it presents many facets. It may be seen from many angles—some stereotyped and dull and others which radiate new light with kaleidoscopic brilliance. For my part, the impersonal semi-surgical facet is dull and unimaginative and can only lead to a *cul-de-sac* in which future generations of the Royal College of Obstetricians and Gynæcologists will satisfy their consciences by patting each other on the back because they can get no further. The improvement of orthodox obstetrics is one of the triumphs of our time, but it is not enough. The pseudopodia of unorthodoxy must be extruded into uncharted territories, and new realms of possibility explored.

When as a lonely wanderer I first set out to investigate the emotional influences of pregnancy and parturition, it was the paradox of pain in a biological design that urged me on. When my friends heard what I had found off the beaten track, they listened politely—much too politely for my comfort. I was warned by them against publishing anything new. "Natural Childbirth" in 1933 justified their warning. For a year my professional life hung in the balance; pregnant women hurried past my door like scalded cats, but in spite of all it is more satisfying to be nobody with something than somebody with nothing. So the facet which reflected the "emotions" was gazed upon, and its importance grew in stature.

The education of pregnant women in the laws of Nature could only be successful if the mental attitude towards childbirth was rectified. The principles of health of body were ineffective if the

body remained subservient to an unhealthy mind. The chemical and physiological stimulus to maternal and fœtal development were impeded in their normal function if the emotional system was responsible for prolonged stimulation of the sympathetic system. Tension of mind reacts upon the internal secretory functions, as Cannon and others have demonstrated. Tension of mind begets tension of body keyed up to protect itself against attack; not corporal violence, but the clandestine and insidious assaults of fear.

Implanted in the mind by agents already described, the strongest of all the emotions insinuates its toxic influence upon mother and child alike. The excretory and secretory mechanisms are harrassed or injured, and symptoms of chemical and hormonic imbalance not infrequently appear. Their occurrence is explained in text-books, or not explained, as the case may be. Threatened miscarriage, vomiting, salivation, constipation, diuresis, fainting and many other complications of pregnancy have been caused by fear and cured with surprising rapidity by removal of that cause. The association between these illnesses and the emotional state of the woman is found to be so obvious in many cases that the value of general education in pregnancy is largely nullified if the purely psychical factors are not considered and effectively treated.

It is not simple idealism to impart pride and respect for childbirth to women; it is not sentimentalism to speak of this miracle as a thing of beauty; it is not exaggeration to pour scorn upon the old wives' tales of a past generation. However complete the antenatal education may be according to all accepted rules, it is lifeless if the mind is not cared for, and however carefully physical conditions are diagnosed and corrected all these attentions may well be in vain if the psychical influences are abnormal. Your car may look spick and span with polish and paint; the lamps, the carburettor, the distributor, the tappets in perfect adjustment, but what would you say to your chauffeur if, on a long and arduous journey, the battery gave out in the most lonely part of the country you had to cross? The source of all the impulses upon which the performance of your car depended—the vital organ without which the otherwise perfect machine was useless—had been forgotten. You and your car would probably be hauled out of trouble by a carthorse—like a good many babies!

It is after good care has been taken of the mind of the pregnant woman that the methods of natural childbirth can be effectively used. In most cases, such care will have required very little, if any, extra time. There are many districts where fear-destroying tactics are employed by midwives, antenatal clinics and health visitors.

In a few even doctors are trying, having heard that the good results that midwives get are due to the use of these measures.

It is not for one moment suggested that adequate notice can be taken in public institutions of the emotional influences upon pregnancy. To-day, I lunched with a professor of obstetrics who is head of a large hospital organisation. One hundred and twenty women presented themselves at his antenatal clinic yesterday morning, forty of them new patients, and with two assistants he had to examine and make records of them all. It is not an unusual occurrence, but it is not obstetrics. Such mass production demands either conformity to limited rules of procedure, or an entirely new organisation. There is no blame to lay ; it is the absence of men and money to carry out the work. During the last ten days, three contraction rings after labour of seventy hours or more were sent in to be dealt with. My friend remarked how much more nervy his patients had become since the war. " They cannot be taught relaxation ; they cannot be given the time to discuss their anxieties." In a few days, therefore, three good babies were lost to our dwindling population because of a complication arising primarily from psychical causes. Effective education might have been a life-saver could it have been given. The large majority of women are sufficiently healthy of body to have babies without any troubles, but few are so healthy in mind and understanding that they can give their bodies a fair chance. False belief, anxiety and doubt are real and prevalent dangers, but the present system of obstetric education and treatment cannot combat them. It is the next and most important line of advance. No effort should be spared to protect the mind as well as the uterus.

The more experienced the physician, so much the greater truth is recognised in this teaching. With few exceptions, the surgical obstetrician cannot be bothered. The facet he views does not reflect the light of human nature. Education of the mind can only be given at a price. It takes time and patience and a deal of concentrated thought. They view with cavillation and cyniscism such expenditure. Oscar Wilde once wrote : " The cynic is one who knows the price of everything and the value of nothing." Obstetricians who have given this teaching a fair trial have found the price small in comparison with the value of the results obtained. They are no longer cynics, but enthusiasts. Their objective lies beyond the prevention of post-partum hæmorrhage ; they can procure post-partum happiness and healthy parenthood. They do not seek fame for the brilliance of their interference, but rather satisfaction in the simplicity of their success. They are not puffed up with the pride of their performance, but awed and humiliated to have made the path straight for so great a miracle.

ANTENATAL EXERCISES

The object of these exercises is to ensure that the change of shape necessitated by the increased size of the abdomen during the later months of pregnancy does not result in muscle weakness, bad position or lack of tone in those structures the efficiency of which is of importance in normal childbirth.

1. **BREATHING.** Stand with the feet about eighteen inches apart, the arms hanging to the sides, palms to the front and slightly behind the centre of the thighs. The back must be arched and the head thrown comfortably back. A deep breath is taken, and at the same time the arms raised from the sides upwards and outwards until they are level with the shoulders. The chest is emptied of breath and the arms fall again to the sides. With inspiration, raise up on the toes, and with respiration sink upon the heels. Do this from nine to twelve times, according to comfort.

2. **MUSCLES OF THE BACK AND ABDOMEN.** Kneel on the bed with the hands in front in the position of "all-fours." Raise the back up and bend the head down between the arms so that the trunk is curved upwards to its maximum extent. Then raise the head and let the back fall, slightly bending the elbows so that the concave curve of the spine is at its maximum. Do this six to nine times slowly and deliberately.

Kneel down, sit back on the heels, bend the trunk forward until the head touches the knees, with the forearms on the ground. Breathe out whilst going down to this position, then raise up, drawing the hands towards the knees until the hands rest upon the thighs just above the knees. Breathe in whilst raising the body. The knees should be at least 15 inches apart so that the weight of the body may be felt pressing down upon the pelvic girdle.

3. **MUSCLES OF THE ABDOMEN AND PELVIS.** Lie on the back with the hands at the sides and the head supported by a pillow. Raise each leg alternately from the floor as high as is comfortable ; if it can be done easily, bring it up to a right angle to the ground. Drop the leg slowly to original position, then do the same with the other leg. Raise each leg in this manner six to nine times.

4. **STRETCHING THE PELVIS.** Lie on the back, bring the heels as near to the buttocks as possible with the feet resting on the floor. Allow the knees to fall widely apart, then bring them together again. It is important that the muscles of the inner side of the thigh should be completely relaxed so that there is no resistance to the falling apart of the legs. Do this twelve times.

After these exercises are completed lie on the bed at full length, and completely relax all muscles of the body, face and limbs. Take three or four deep breaths and try to feel that you are sinking through the bed. Lie like this for half an hour.

The exercises should be done in the late morning or last thing at night. They should not be commenced within one hour of a meal.

DIET DURING PREGNANCY

MEAT. From now onwards, gradually cease to eat red meat ; that is, beef, mutton, or lamb. This does not include liver, which may be eaten from time to time, as may sea-fish, chicken or game. It is wise to avoid pork and veal altogether. Do not have any of the above foods cooked in fat. Fried foods often cause acidity and heartburn.

SOUPS AND MEAT EXTRACTS. These have very little value as foods, but they stimulate the appetite by their pleasant flavour and may be taken in moderation.

VEGETABLES. These may be taken freely in all forms ; they are better steamed than boiled. Raw vegetables, such as carrot, lettuce, endive, watercress, red beet, cabbage, may be cut very fine or put through a mincer and used as a salad.

FRUIT. All forms of fruit may be eaten, and it is advised that a considerable quantity be taken every day ; one or two apples, the juice of three or four oranges, dates, prunes, figs, grapefruit, etc. There is no reason why a little fruit should not be taken between meals, if this is desirable.

BREAD, etc. Fresh bread, pastries and cakes should be avoided as much as possible. Wholemeal or brown bread is better than white.

CEREALS. Oatmeal porridge is a valuable food, particularly at breakfast with a little cream or milk. Some fresh fruit may be mixed with it—apples, raisins, dates, figs, etc.

MILK, EGGS, BUTTER, CHEESE, are all easily digested, wholesome and harmless, and should be liberally included in the diet, particularly the first three. At least one, and preferably two, pints of milk should be taken daily.

FLUIDS. These are important. Two quarts daily should be consumed, either plain water or barley water, weak orangeade or lemonade and occasionally, if there is any necessity, an aperient water such as Apenta, weak tea and coffee in moderation.

MILK or one of the malted milk preparations is best last thing at night.

ALCOHOL and SMOKING are best avoided altogether.

CHAPTER XIV

THE CONDUCT OF LABOUR

MANY of my friends have asked me to give a detailed account of the conduct of labour which embodies the fundamental principles of what has become known as "Natural Childbirth." It will be unnecessary to repeat the teaching of our great masters of obstetrics so far as the ordinary routine of midwifery is concerned. The general principles of good obstetrics must be recognised and practised by all who undertake the attendance upon women in labour. I refer to such things as asepsis, the instruments, medicines and dressings to be carried and prepared. The contents of the obstetric bag, the preparation of the patient, the arrangement of the room in private houses and the duties of the nurse or physician attendant are subjects adequately and accurately dealt with in the standard text-books on obstetrics.

The obstetrician must be fully prepared to meet or provide for all emergencies, and since chapters on the conduct of labour are usually concerned with the imminence of the unforeseen, it would be vain repetition to delve into the abnormal. Let it be presumed, therefore, that all the sound general principles are employed for the safety and care of women so far as the purely physical process of parturition is concerned. Here we will examine the conduct of labour from the point of view of the woman herself, her mental condition and changing emotional states, and endeavour to deduce without elaboration or bias the importance or otherwise of paying more attention to this aspect of childbirth. It is not intended to offer a panacea for all the ills of labour, and has but little influence in rectifying genuinely abnormal conditions or occurrences, but it does raise the question of preventing troubles which appear to be relatively unimportant but which in reality are the roots of many serious evils.

In the previous chapter attention has been drawn to the emotional states and sensory conditions to which women are subjected in what is believed to be normal and natural labour. The necessity for recognising the important purpose of these phenomena has been pointed out. It is not easy, at first sight, to foresee how labour can be conducted along lines so unorthodox. It is even more difficult to assess the value of retaining the natural design, when the cultural plan is apparently so efficient. Happily, we have a reply which is

incontestable. A large number of women have been willing to give their own opinions, many having had children by the accepted routine and treatment before they became acquainted with the methods about to be described. I sincerely hope that great obstetrician, Joseph De Lee, of Chicago, whose personal interest and kindly criticism of my "lone trail" has been a stimulus to this work, will be lead to wonder if he has not been a little too pessimistic in his prophecy: "It will require several thousand generations before we can train the women back to the state which Grantly Dick Read speaks of as Natural Childbirth" ("Principles and Practice of Obstetrics," De Lee, 7th Edition, 1938, pp. 339 and 340.) I do not like to consider this a method by which women are trained back to a state, but rather a means of liberating them from the burden of mediæval misunderstanding, and thereby enabling them to make use of the great gifts of Nature which early civilisation has buried beneath the pompous cloak of ignorance. Elation, relaxation, amnesia and exultation are the four pillars of parturition upon which the conduct of labour depends; each, in its proper place, maintaining, supporting and controlling the impulses, both sensory and motor, upon which the neuro-muscular harmony of the function survives.

Parturition is still considered to be the great event in the reproductory cycle of woman. Although in recent years antenatal care has become increasingly important and its value fully recognised, labour is the real excitement for the patient and midwife; the last few pains of labour, at least, must not be missed by the doctor who wishes to prove his skill as an obstetrician.

The nature of labour depends basically upon the efficiency of antenatal education, care, and, if need be, treatment, and the act of parturition should be complementary to the conduct of pregnancy. In modern childbirth, the importance of labour is overestimated, and the full significance of antenatal preparation is overlooked. Natural childbirth depends in nearly every case upon the education of the mother; she must be aware of the natural process in order to assist in its design. She must understand and expect the changing phenomena of labour, so that normal actions and reactions occur uninhibited by resistant forces. The four pillars of labour that have been mentioned above must be maintained and fully utilised so *that parturition may progress easily and smoothly* from one stage to the next. But this is impossible if the woman has not been educated in their significance, does not understand the routine of Nature's principles, and at the time when various phenomena arrive, cannot meet them in full confidence, unshaken by the various changes in their manifestation. Above all things, confidence

must reign supreme ; there must be no fear, either for the events of the immediate present or the ultimate result of labour ; the earliest sign of anxiety must be challenged, the mind of the parturient woman protected from this great evil—fear.

A sister at a maternity home where elementary education in the physiology of labour is given as a part of the antenatal care was discussing the conduct of a woman whom we had just attended. The whole process had been perfect ; a delight to all who had been concerned in it, including the mother herself. " The more I see of this natural childbirth, the more I am persuaded that education is what really matters. Although, so far, we have neither time nor opportunity to teach our mothers as fully as we would like to, the change in our cases is remarkable. There is a different atmosphere in the wards ; those who have their babies have no recent horrors on their minds, and those who are about to have their babies are not afraid. Our women are happy and the babies are peaceful. We may have as many as thirty-five to forty babies in the nursery wards, but it has become the exception to hear a crying, restless baby, not the rule as it used to be." I asked her frankly if there was any obvious difference in the conduct of labour in my cases from those of other obstetricians who also practised the general principles that I teach. Her reply was interesting, because she is a woman of wide experience and a midwife of consummate skill. " None whatever ; the difference is in the women. They seem to know their job before they start ; they know what first stage contractions are doing and realise that it may be a long time before the ' door is opened.' They understand why relaxation helps and why it prevents the pains of labour. . . ." She had much more to say, but the point that appealed to me was that she saw no obvious difference in my conduct of labour from the methods of my confrères, but the behaviour of the women was different. That she attributed to prenatal education more than to any other factor. There were still reputable and experienced men attending cases at that home who gave no prenatal instruction, who explained nothing at the time, and who gave relatively deep anæsthesia as a routine. The woman was not considered in any way, and operative obstetrics were frequent. It has fortunately become the accepted practice to send for the medical man in these cases when the second stage is well advanced ; this is satisfactory to him and to the midwives in charge, for a certain amount of instruction can be given to great advantage during labour, and by quiet personal attention fear may be kept as inactive as possible.

The usual routine in a case of natural childbirth is as follows :

Women are all asked to go into the maternity home as soon as

they are conscious of regular contractions every fifteen to twenty minutes. Multiparas recognise these " pains " and waste no time, since they know how rapidly labour may develop under the influence of relaxation. Primiparas have more time in which to decide if the contractions are the real thing, but my practice is to ask them to speak to me on the telephone if they have any doubt ; there is usually a telephone box near by if there is not one in the house.

Having arrived at the maternity home, a hot bath and an enema are given in most cases ; this procedure is advantageous from all points of view. If the membranes have been ruptured before labour started, an enema is given but no bath.

As early as possible in the first stage my visit is made to the patient. This is not a hurried rush in and " Glad you've started ; get on with it ; I'll be back in time " sort of visit, but a prolonged stay, possibly for an hour or more. The natural anxiety or anticipation at the commencement of the final episode must be overcome by kindly but careful explanation of the sensation she is experiencing. It must not be overlooked that the most cheerful and apparently carefree woman may be very frightened. Beware of an excess of laughter between contractions ; it is often a manifestation of tension of the mind and may well turn to tears when real effort and control become necessary in the later stages of labour.

During the visit a calm, reassuring but firm kindliness is desirable. In spite of all teachings to the contrary, I am persuaded that women are best lying down on their bed during the first stage of labour. If relaxation has been practised and acquired as a habit, it will easily be obtained during first stage contractions. Until a controlled relaxation is obtained, the patient should not be left.

The points to remember are the few deep breaths as the uterus comes into action ; eyes open and face relaxed—that is, no frown or puckered brow, no screwed up eyes, no pursed lips or grinding teeth. There is no need for these exhibitions ; they do no good ; they are either demands for sympathy or manifestations of fear. Both increase neuro-muscular tension.

With the utmost patience procure a well-relaxed woman early in labour. Such patience is amply rewarded. Speak quietly and with understanding ; be honest in your advice and gentle in manner ; point out once again the significance of these first stage contractions. They are pulling open the outlet of the womb ; step by step it expands and muscle is collected up and shortened, so that it cannot close again until the baby has passed through. " The uterus must be left alone ; it can do all this without any effort to help on your part. Consider it a machine apart from

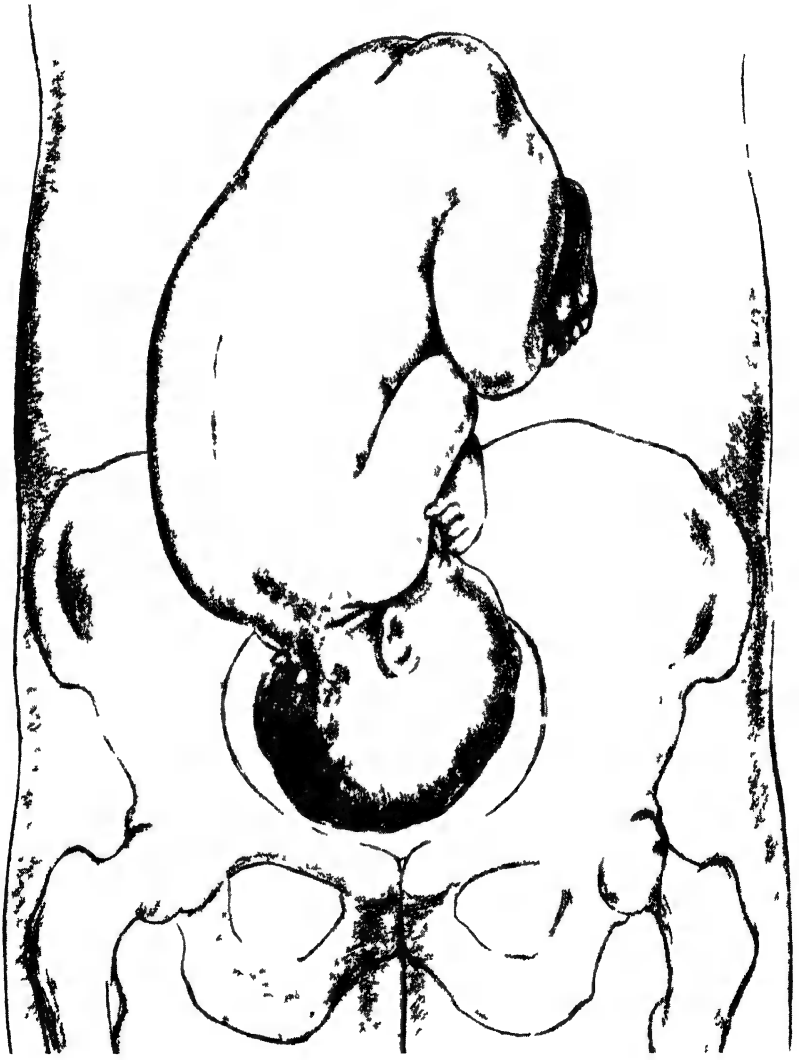
PLATE V

A B C

DILATATION OF THE NECK OF THE UTERUS.

A Before labour starts closed
B First stage progresses half open
C The Open Door First stage completed stage of expulsion commences

PLATE VI



Drawing of Pelvis in Relation to Position of Child at Twenty-eight Weeks

yourself, and in due course the dilatation of the outlet will be complete. There is no hurry; the door will open, but you must not make the work harder for the uterus muscle by tightening the door. If you are rigid and squeeze up your face, then the muscle outlet will squeeze up too. But the uterus is astoundingly strong and persistent; the result of your resistance will be pain. The more completely relaxed you become so much more elastic will be the mouth of the womb, and so much less discomfort will you experience."

It is frequently observed by women how different labour becomes once relaxation is obtained. They are encouraged to maintain this state because it is common sense that an elastic opening is not only more easily but more quickly expanded.

During this time, reassurance in the normality and straightforwardness of everything may be given. Gentle encouragement to be patient and persevering is helpful. A peaceful, confident atmosphere should be maintained and a close watch kept upon any untoward trend in conversation. At this time a woman is only interested in her own business; she is doing a job of work and wants to concentrate upon it in order to do it well. Most women who understand what is going on are keen observers not only of their own actions, but of the reactions of those about them to every fresh event or incident.

I have laid stress previously upon the sensitiveness of mind of a parturient woman; if you wish to try to deceive them you will fail. They miss nothing, and have a way of turning over in their minds the things they see and the words they hear.

Stand, therefore, in the forefront of the contest, side by side both mentally and physically, with the woman in labour. The obstetrician is not only the help when trouble arrives, but the protector from trouble. And above all, if he is wise, he will watch and listen, with senses as acute as a lone sentry in the night, for the obvious or insidious intrusion of the arch enemy, which is fear.

I say most definitely that such care in the early first stage lays the foundation of a labour which will stand for all time as a monument of happiness in the mind of a mother. From the midwife and obstetrician it demands patience, peacefulness and personal interest as well as confidence, cheerfulness and concentrated observation. These three P's and three C's may be easily remembered by beginners—and have been referred to in some of my lectures on this subject—as the capital letters of the Perfect Confinement. The percentage of labour which conforms to this high ideal is rapidly increasing. As the importance of treating the mind becomes recognised, this picture of normal labour is more frequently seen.

Let us consider in detail these six cardinal requisites of the obstetrician and midwife.

Patience is the most exacting of virtues, but probably the greatest of all. When a woman is being attended in labour, every other consideration must be of secondary importance. Babies have a habit of arriving out of turn and out of time ; they do not respect the ways of adults. On the few occasions upon which I have taken a reasonable risk during the last few years, I have invariably been caught out by the sudden and rapid arrival of a child in my short absence. For three years in succession my summer holiday was planned for three weeks, giving ten days clear at each end from any booked dates for births. Each year from ten to fifteen days of that three weeks had to be sacrificed to infants who insisted upon remaining *in utero*. It is not surprising that my family has a poor opinion of obstetrics as a hobby. To invite friends to dine is to precipitate a labour during dinner, and to fulfil a long-standing promise of a family evening at the theatre is practically impossible. The special days of the school term when the children look forward to a visit from their "baby doctor" father are frequently days of disappointment. Such a calling demands patience and considerable sacrifice. We still hear of normal cases having the membranes ruptured early so that the physician could get the case over in time to do this or that. We still hear of anæsthesia and forceps being employed to assist in the maintenance of a social programme, and even for the purely selfish motive that it is the quickest method of getting the job over. Obstetricians are sometimes busy men, but there is no reason why busy men should not be obstetricians ! I am frequently told, " But my dear So-and-So, I simply have not time to do all this. There are others to attend to, and other things to be done." My reply is that nothing should be allowed to rob a woman in labour of the undivided attention of the doctor and midwife in whom she has placed her confidence. I sympathise with a man who has to remove septic tonsils, appendices and ingrowing toenails in the capacity of surgeon to the local hospital, and then hurry to a woman in labour. His operative skill demands to be exercised ; he is activated by surgical impetus ; anæsthesia, manipulation and tissue injury are commonplace. To sit by and guide the mind, patiently to wrestle with psychical influences, quietly to comfort the consciousness is small fry for one whose local reputation as a clever surgeon has to be maintained. Patience is in the pattern of a physician's mind ; observation and deduction, perseverance and persistence are attributes more rare and to be desired than digital dexterity.

No specialised calling in our profession demands such concentrated sacrifice and such controlled patience as pure obstetrics. It is a

communion with the most noble and the most inexplicable manifestation of the spirit of Nature. It has no place for hustle or hurry, and should be protected by law from the incursions of the brilliant busybody. It should cease to be the popular playground for practitioners who claim to be specialists in half a dozen branches of surgery and medicine, and who in reality are a social and scientific menace. For of all men, the virtue of self-effacing patience is most rarely found in these, and to them the art and science of obstetrics is most unbecoming.

At the bedside of a woman in labour we have to await the will of intangible forces. The emotional conflicts and physical reactions of our patients present a constant stream of problems. Initiative, clear thinking and honest exposition must be at hand to control the fearful, encourage the failing, and support the tired. No force of mind or body can drive a woman in labour; by patience only can the smooth course of Nature be followed.

But patience must be exercised on a foundation of understanding, for anything less might lead to a peaceful waiting upon trouble. The course and progress of labour must be watched and followed in all its stages, particularly at the end of the first stage, when fear makes its most subtle attacks upon a woman and when woman makes her most subtle efforts to escape. And so it is again in the latter half of the second stage; it is so slow; there seems to be no advance, no progress; the weary hours hang heavily, and the semi-conscious woman is so noble in her efforts, so courageous in her determination. Then the strong urge to interfere tempts the kindly nature of the obstetrician. A voice whispers: "Help her; a whiff or two; small straight blades will do it. She is tired; she has been marvellous; she deserves to finish now." This phase is fraught with evil. It is the devil standing in the guise of liberator of the oppressed, playing on the kindliness of man's nature, persuading him to commit the unforgiveable crime.

Patience—hard put to it—must be heard; it carries safety and health to both mother and child; it is the immutable law of Nature, and rarely, if ever, betrays those who have faith in its ultimate beneficence. How many matrons of maternity homes have watched that struggle in the minds of obstetricians; they have judged men on their reactions to those impulses, and they have seen tragedy or joy reward the choice that has been made. One grand old man of obstetrics, whose name is known throughout the schools and universities of England, would frequently turn to the matron of his nursing home when labour had reached the stage described, and say: "Sister, put my bag outside the door; lock it and keep the key in your pocket. If I ask for my forceps, say 'No.' Quick, take

it away ; I am sorely tempted ! " And his bag was removed from the labour ward.

Wait patiently, and watch lest any harmful thing occur. It is astonishing how often patience will overcome difficulties and solve the host of mythical problems the long, quiet, waiting hours of night will create in fertile minds.

Peacefulness. Nothing is more irritating than noise and restlessness when relaxation is sought. Nothing is more exasperating than inconsequent chatter when the mind is occupied with an all-absorbing interest. Disturbing interludes of tune humming or muffled tap dance rhythm on the bedside, frequent comings and goings, openings and closings, shufflings and solicitations, are thoughtless actions of those who have no human understanding. Women in labour abhor loud voices and terse commands ; they are alarmed by the clumsy incongruity of the bull (or even the cow) in the china shop. I shall never forget the harassed, agonised expression on the face of a nineteen-year-old girl whose doctor had sent for me. The labour had been slow, and the mother-in-law —a perfect example of one of the major pests of parturition— rushed dramatically into the drive and flung open the door of my car before the chauffeur could leap from his seat. She tugged my arm, and cried, " Come, oh, come quickly. They are killing my daughter. Save her ! Save her ! " I ceased to be popular when I looked down upon her and asked with a smile, " From whom ? " The scene upstairs was one of tribulation and turmoil. The nurse was perspiring and flushed ; the doctor had a red apron on and a blue and red striped shirt ; his collar was off and his sleeves rolled up. The girl, uncovered from the waist downwards, was biting a towel which had been stuffed into her mouth ; the room bore evidence of rapidly disintegrating dignity. When I entered the room, I was greeted with a triple sigh of relief ; I think a policeman would have had a similar greeting at that moment. The towel was taken from the " patient's " mouth ; she flung a tired arm across the bed to me, and said, " For God's sake give me peace." There was nothing abnormal in her labour, except its conduct. Each contraction had been a signal for loud shouts of, " Push, shove, pull, hang on ! " Pressure on the abdomen alternated with the raising of the left buttock to see if the child was appearing. Nurse, doctor, and even mother-in-law gazed at the inoffensive outlet in an agony of anticipation. But the cervix was not fully dilated. It was suggested that they were all very tired ; I advised a large brew of tea—downstairs—away—a cigarette or two, and a cup of tea for the patient and myself upstairs, weak and warm. In one hour a normal second stage had produced a healthy baby. A

few whiffs of gas just at crowning time, and peace reigned. The pitiable request of that girl, tortured by the turmoil of her parturition, " For God's sake give me peace," embedded itself in my mind and left an indelible impression of the powers of peacefulness.

Personal Interest. One of the most gratifying features of a normal labour is the personal interest and undivided attention given by the attendant to the parturient woman. This applies particularly to primiparæ. However great the confidence and courage, the knowledge that someone competent to understand is near by affords a comforting sense of security. How many doctors have been told, " Everything seemed much easier when you arrived." It is not the doctor himself who brings relief, but the instinctive dependance of woman finding satisfaction for its natural demand, which is someone upon whom to depend. This does not only happen to doctors, for the patient and the whole household relax in a feeling of safety when the midwife arrives.

The importance of the obstetrician's presence is not sufficiently realised, and one who fills this high office should be sure that no laxity of interest disappoints the woman who relies so implicitly upon his judgment, knowledge and skill.

If mental and physical tension is to be minimised, or even avoided, the first evidence of personal interest is the early arrival of the accoucheur after labour begins. The mind of a woman can only be put at rest by a close personal understanding of her doubts and fears. Fears can only be avoided or destroyed by the maintenance of confidence, and confidence is gained most easily by actions which justify its existence. I do not for one moment suggest an aimless fussiness or extravagant show of zeal. The acute sensitiveness of a woman in labour must be constantly borne in mind. Her physical comfort can be attended to without ostentation ; her hot drink * or her cold drink *—whichever she prefers—may be given without demand for gratitude. Do not desire to make it obvious that you wish to be helpful ; very few women have any use for sentimentality and " sob stuff " in labour. They do want practical, common sense companionship, and that should be dispensed according to the particular woman. No two labours are alike ; no two women are alike, and there is something new to be learned from every case of childbirth. No rule of thumb for the conduct of parturition exists, and I know no rule that governs the conduct of women. It is at this time you see the true woman. Give her your attention and you will witness the metamorphosis of the female of the human

* For years I have used raspberry leaf tea as a drink for women in labour. *Vide* Professor Sir Beckwith Whitehouse on " Fragarine," *British Medical Journal*, September 13th, 1941.

species. Be interested in her elation, encourage it and mildly share it; she will feel that you are in harmony with her and will more readily accomplish relaxation of both mind and body as the contractions become firmer. Then, as the spirit of jocularity wears off, as it does, the reality of her task dawns upon her consciousness with a calm confidence. As the first stage progresses, the word of friendly counsel and authoritative advice is welcomed as a draught of water by a thirsty man. Your interest, your attention, your presence, and even your hand are pillars of strength to aid her in the new undertaking. The veneer of womanhood is removed, she concentrates upon essentials, and both learns and performs her task with the utmost fortitude.

It cannot be too strongly urged that these changes are observed, for if they are not expected and received with understanding, the unity of purpose that should exist between woman and obstetrician is likely to be found wanting. The final dilatation of the cervix is the phase that calls for the greatest control. A woman demands that her courage be sustained. There may be real discomfort at this time in the most natural cases, but if her confidence has been maintained by a sympathetic comprehension of her reactions to psychical and physical stress, she will pass quietly into the second stage with its lowered mental appreciation and its modified interpretation of sensory stimuli. Then, with relaxation between contractions and effort with them—instead of relaxation during contractions as in the first stage—the most profound change of all occurs. She wakes to work, and does not stint the violence of her expulsive strain. As it passes off, her few deep breaths of recovery precede complete relaxation, and even sleep, until, reinforced once more, she calls on you to help and encourage her to get the best possible result. I have been moved to such a height of admiration by the cheerful, courageous determination of good-hearted women in the second stage of their labour, that no service or sacrifice on their behalf has seemed too great—women whose flippancy and foolish behaviour, whose exaggerated cosmetic atrocities and uncontrolled domestic excesses have given them the appearance of decorative but useless butterflies, not infrequently confound criticism by exhibiting a quiet, unbending stoicism during labour, with complete scorn for any word or action that may suggest the absence of "guts." Give them personal interest, companionship and a good lead and they will follow you cheerfully through what others have told them is hell. And what is more, they will find it is not hell, and tell you so. Do not be mistaken by pre-judging a woman; wait until you see her with her baby, for by then you will have had good reason to know the stuff she is made of and the stock

of which she comes. The quiet, domesticated woman, filled with good intentions and a high estimate of her own ability, may prove deceptive to herself as well as to her doctor. She may have retained her social respectability because of her environment, but she may have feared to venture where more exuberant youth has dared to take a foolish risk. I have been disappointed in many women of this type; the interest that they demand from you is that you should witness a demonstration of perfect behaviour. They accept suggestion coldly, and prefer their own methods; they have been adequately informed behind the closed door of the boudoir; the family name, even, may be at stake. I advise a very firm control in such cases, for if you cease to observe and fail to dominate these rigid personalities, you are in for a squall. They have never had the courage of unorthodoxy, and crack beneath the first shock that the call for determination and fortitude gives them; they have not given vent to the spirit of adventure which learns to control fear.

For your patient's sake, be interested in her mental and physical well-being during labour; for your own sake observe closely her reactions to its demands. You are dealing with several different women during labour; she who is reacting to her social environment in the early first stage has little physical and mental resemblance to herself reacting to the instinctive neuro-muscular energies of the late second stage.

Varium et mutabile semper femina, but never more so than in childbirth.

In general outline, I have drawn attention to some of the advantages of personal interest in a woman in labour, but the evils of its absence are not usually recognised. All sensitive women are hurt by friends who appear disinterested when friendship is most salutory. When, in times of anxiety, the support we expect of those in whom we have implicit faith is withdrawn, and when our self-confidence and fortitude are severely tested by the manifestation of a mysterious assailant, we long for the comforting voice of calm; our whole soul cries out for that companionship which compels courage by its very presence. No greater curse can fall upon a young woman whose first labour has commenced, than the crime of enforced loneliness. Why cannot every obstetrician realise the enormity of this mediæval inquisition. Yet, each day and every night, partially or totally uninstructed women are left alone to "get on with it." They cannot understand the mechanism that brings these recurrent pains; there is no escape, and each contraction, more hateful than the one before, slowly drags the great crescendo of its irresistible might to the very edge of unendurable agony. The agony may not come, but it is so imminent, so terrifying

and so real in its proximity that the groan of apprehension is raised to an exasperated wail. Loneliness increases our terrors ; under its hideous emptiness we wilt beneath the chastisement of our wild imaginations ; we visualise, in its silence, the ultimate horrors of possibility, and draw tight the protective cloak of mental and physical tension in readiness for either fight or flight. To be afraid at any time is bad enough, but to be conscious of the presence of a real and justifiable cause for fear, ever advancing to destroy or torture its victim, is an experience that can freeze the bravest heart and scar for all time the strongest mind.

I do not lightly recall my most hideous hour ; it was in August, 1915, shortly after we landed at Suvla Bay. My watch upon the beach commenced at 2 a.m. On the edge of the mud of Salt Lake, crystal coated and faintly glistening in the brilliant starlight of a moonless sky, was my dressing station. Some three hundred badly wounded men were lying shivering in the cold night air ; the fierce heat of day had fled with the fading light, and in a few hours men's breath was frozen on their beards. To those who were in pain I gave the maximum dose of morphia ; rifles and bayonets used as splints required adjusting ; tourniquets had to be released and re-applied. Water was scarce, but some could ill afford to be left without their share of our meagre supply. The monotony of this round was depressing, for there were no ships' boats to take them off the beach. From time to time, Death seemed to reach down from the empty spaces and seize this man or that, and on each round I made, a carcass lay where but a short time past I had heard courageous words of patience and gratitude.

I sat to rest upon a mound of sand from which I could hear any call from my stricken flock, and wondered if the living knew that their silent neighbours had passed on. It became so still that only the breathing of the sleepers could be heard, and suddenly I became aware of utter loneliness. I thought afterwards that some instinctive warning brought that strange desire to fly. In fact, such an impulse was unthinkable, but in theory at least I was reacting to an undefined fear. I had not many moments to wait for the explanation —from only a mile across the bare lake, on Chocolate Hill, a rifle was fired, rending the stillness so unexpectedly that I started and became alert. But it was followed by a sound of war that still rings in my memory, more terrifying than the bombs that are bursting, as I write these words, near enough to shake the lamp upon my table. It was the sound of a bayonet charge ; the Very lights leapt from beyond the hill ; the shrill yells of madness and bloodlust mingled with the wild whoops and screams of victor and vanquished. A few revolver shots, and soon the lights died down. The stillness

was a thousand times more intense after that mad quarter of an hour. I knew our line was feebly held by tired and battle-stained troops.. I peered into the distant blackness wondering who had won. Had the Turks broken through, and should I see the gleam of steel and the fire of mad eyes looming up from the darkness? I would have given anything within my power to have had a trusted companion with me, even if only to ask him who he thought had won. But I was alone, and that sickening doubt wore down my vitality. I stumbled, tired and frozen, round my patients; my hand shook as I held the water bottle to their lips; my eyes turned unwillingly, but half expectantly, to the black mile that stretched to Chocolate Hill. My mind ran riot, and I suffered agonies of apprehension and fear. Not long after, dawn broke in grey and purple lines across the hills. My relief came with the first rays of sun, and he asked me of the night. I gave him my report, and he looked at me and said, "You look worn out. What's wrong?" He was an old Cambridge friend of mine, and my answer was, "I have never known before how frightful loneliness can be."

The landing of August 6th, the hail of fire over Lala baba, had been the reality of slaughter. But that night I had died a hundred deaths. Later on I was on the Somme, at Ypres, Arras, Amiens and Cambrai; Bourlon Wood, Farbus, Flecquiere Wood, Fampoux, and a dozen other battles where there was ample food for fear, but never suffered so acutely as when I learnt what loneliness could mean.

Perhaps that is the reason why I shudder when I pass the door of those wards where women lie alone, enduring the first stage of labour. They are not educated to their job; they are told to "get on with it." From time to time, a nurse looks in and speaks some word of hope, but goes again because she, like other nurses, is so busy. I wonder what goes through those tortured minds, torn with ignorance and doubt, and rigidly resistant. Their uterine contractions make pain for themselves and prolonged labour for their child.

Hospital organisation, we know, makes constant attendance upon all women in labour extremely difficult, but within the last five years some few understanding professors have instituted labour sisters who never leave the patients alone. We sympathise with all who work in hospitals where such service is hampered by inadequate provision of staff and space for individual attention during all phases of labour, but in private practice it is one of the main sources from which troubles in labour arise. Therefore, I repeat, take personal interest in your patient and remember that no woman should ever suffer the mental (and therefore physical) agony of

loneliness whilst she is in labour. Stay with her until she understands; demonstrate to her by patient instruction the advantages of relaxation; by simple examination satisfy her that you have reason to encourage her in performing a simple natural function. Remind her of the necessity for patience; hold out no false hopes of rapid delivery. It means hard work and self-control; it is Nature's first hard lesson in the two greatest assets of good motherhood. Children will always mean hard work and will always demand self-control; this is a small cost price to a right-minded woman. Tell her the truth—motherhood is not fun, it is not a hobby. If it is desired to do it well for the children's sake, then the initiation into a noble life's work should be seriously undertaken, and the significance of the greatness of motherhood in human society should not be obscured by the casual, disinterested attitude of the obstetrician. It is a privilege for any man or woman to guide a beginner; it is a post of grave responsibility, and those who care to take it lightly and who, for selfish motives, take advantage of their status to gain all and give nothing, should be forbidden to practice an art and craft of such far-reaching importance.

A large number of written testimonies to the suffering of women is in my possession. Those who have experienced the tortures of the damned have wounds upon their minds that time will hardly heal. They are not to blame; they are to be pitied. The function of parturition bears the brunt of accusation; this is grossly unjust. There is no more beautiful event in the life of a human being than the natural birth of a child. Subtract from modern childbirth the inflictions of ignorance and it becomes a joy to the mother; protect a healthy woman from the influences of cultural contaminations, and parturition may be witnessed as a physiological masterpiece. Look with quiet comprehending eyes at the miracle of nativity; each reflex is a reasoned part without which the intricate machinery would break down. No sound or movement of the new-born babe is without significance to its survival; no science knows the origin or the nature of those forces which unite in harmony to vitalise and perfect a new life cast off from the uterus of a woman whose facultative genius has developed, nurtured and ripened the physiological facsimile of herself.

The cultural acquisitions of the human race are not yet comparable to the works of God. Some obstetric scientists may require an apology from me for that assumption, but I suggest that if a closer and more personal interest were taken in the mental as well as the physical influences upon childbirth, the cause of nearly all its evils will be found in ignorance and misunderstanding, for the persistence of which my profession must be held responsible. The first principle

for the relief of suffering is the removal of the cause, but in obstetrics we accept suffering as inevitable, and turn the heads of the rising generation towards surgical procedures, drugs and analgesics, when they should be investigating the root of this evil. This could be done in the antenatal clinic, by the bedside or in the nursery. Personal interest and patience will soon direct their thoughts to the source of suffering and their abilities to its eradication. Future generations will recognise in dystocia a pathological state, and will employ the science of medicine or surgery for the sufferer's relief, as indeed we do to-day in abnormal and complicated cases. A great and pleasing surprise awaits the obstetrician who will patiently conduct only a dozen normal labours from start to finish, and who will apply himself to understand the mind as well as the body of his patient. It will require concentrated personal interest in every phase, patience to await the issue, and peacefulness of mind from which radiates confidence, courage and self-control.

It may be asked at once : What is this confidence, this faith which can remove mountains that have stood since the records of civilised woman have been known? It is a belief in the fundamental perfection of reproduction as the greatest and most complete of all natural functions. It is based upon the experience of those who have seen its possibilities ; it is instinctive in primitive woman. Accidents and wastage occur in all forms of reproduction, vegetable as well as animal ; in the human race there are fewer accidents and the wastage is incomparably smaller than in any other form of life.

Obstetricians must believe, and such faith must be based upon observation and truth. There is ample justification for absolute confidence in the outcome of labour if the antenatal care has been correctly and accurately conducted. Without applied science and with clear understanding the large majority of women, well prepared in both body and mind, produce their babies according to the accepted rule. Confidence rests upon the knowledge of perfect preparation. It is well known that conditions do arise, rarely indeed, which are unforeseen, such as persistent, partial or complete, occipito posterior presentation. This most disappointing and serious condition is an abnormality of parturition which must be quickly diagnosed and rectified or the woman is allowed to suffer long hours of physical agony and mental distress. It is for such misfortunes that skilled obstetricians exist, for if such things did not occur, then priests, shepherds and old women would be competent to attend at childbirth as they were considered to be but a few hundred years ago. But even in the presence of such dangers, the large majority of women and babies may be safely treated, and the fact of unforeseen possibilities should not mar the general expectancy

of a successful issue. A much smaller percentage of medical men who attend confinements have confidence either in themselves or in their case than is generally recognised. The teaching of abnormal midwifery is so stressed in our student days that as beginners we lose sight of the normal and natural, and unless we observe for ourselves, we may easily fall into the trap of searching only for the abnormalities in antenatal care and suspecting some subtle ambush in every labour from which the devil himself may leap at any moment.

This attitude, which is really very prevalent, makes calm confidence impossible ; the anxiety of the attendant is to get the case over quickly ; he is prompted by his own unfounded fears to do something—anything. It becomes intolerable to sit and wait ; he prefers to be called as late as possible and leave the waiting to the midwife who is assisting him. In the early second stage he argues that, the cervix being fully dilated, he is allowed by obstetric law to put on forceps, and mentally fingers these adjuvants to his own peace of mind.

An old friend and colleague of mine was discussing with me the midwifery of our time. We were enjoying a pipe and a grouse together, when he remarked, " More than half my obstetric consultations are calls by windy incompetents." It was not the condition of the patient which required his very expert advice, but the condition of the doctor. In no branch of medicine is there a greater strain upon the nervous system of a medical man. We have all desired the presence of a colleague in a trying case, even if only to corroborate our own opinion. At three in the morning we may be harassed by ruminations and imaginations that raise doubts in our minds and even warp our judgment. It takes a strong moral courage to be able to set out all the facts and review the situation with a calm, logical precision, particularly if the patient has detected a weakening in the support you have given her. During labour, women spot a doubt in a doctor's mind as quickly as a kestrel sees a rat in the stubble. Faith in midwifery is not metaphysical, it is founded on facts and is a bond between patient and attendant upon which rests the integrity of parturition and the natural sequence of its events. However good an actor or however suave a humbug, confidence has no counterfeit. It is neither looks, words nor works, but a special sense born on the atmosphere of truth and inflexible honesty of purpose. To have or to give confidence in labour is the hall mark of one whose calling is obstetrics. Many women cannot share such confidence, but this depends on the success of their antenatal education. Some are so afraid that nothing can induce them to have faith in a function

that they believe to be an agony beyond endurance ; their minds are irrational ; they become abnormal. If a woman's mind is so constituted that it cannot admit a fact, her labour is as pathological as that of a woman whose pelvis is so constructed that it cannot admit a fœtus. If it is remembered that natural childbirth is largely of the mind, care will be taken to promote justifiable confidence in all concerned in the case from the earliest weeks of pregnancy onwards. Thus, fear, the arch enemy, may be attacked and subdued ; happy, carefree pregnancy is a grand preparation for an easy confinement.

But always be on the watch. *Observation* need not be obtrusive, but it must be accurate and keen. You are more likely to find abnormalities by delineating the boundaries of good health than you are to find good health by concentrating upon real or phantom abnormalities. Only to-day, a student remarked to me, " We have only had normal cases lately, but Mr. X is coming in later on this afternoon to put on forceps ; the woman has been in labour two and a half days ; we think she is an occipito posterior ; it should be quite interesting." " Ah, splendid," I replied to this lady who, though a student, is a potential mother of to-morrow, " very interesting. I expect the woman is getting interested by now." Of course it is exciting to see the abnormal, and necessary for training, but must the normal and natural be considered dull ? It is only in these cases that any beauty can be found in midwifery. These simple, straightforward performances are the perfect initiation into motherhood ; surely here is the field for observation. Each constituent of the ordinary is so extraordinary when understood. It is so in Nature, in every sphere, it is one of its great fascinations. It is more thrilling to watch an avalanche crash in a cloud of snow to the bottom of a ravine, to hear the roar of its thunderous progress and witness the devastation in its path, than to lie on the rand of a Norfolk marsh. Yes, more thrilling until you have looked quietly and closely into the reeds. As the peaceful beauty of Nature is observed, its constituents gradually appear ; silver fish light up the shallow water, great swallow-tail butterflies flit decoratively from ragged robin to wild angelica ; small cotton tufts reveal the newly hatched cocoon of *Epeira Cornuta ;* each wee spider is a thrill as it sets out on its great adventure ; a moorhen calls and hurries her fluffy offspring past your observation post ; a bittern booms in the distance. At every turn of the eye the simplest form of Nature is found to be full of excitement and fresh beauty. The more closely we look, so the treasure house opens fresh doors of wonder until we become absorbed in the perfection of simplicity and the magnificence of the ordinary. I have done this so often during the last forty

years that the intrusion of foreign bodies in smelly motor boats and multi-coloured vulgarities of clothing is equivalent to disease attacking the normal peacefulness of natural beauty. The thought of these disturbers brings resentment ; they are not interesting. And so in all observation of a natural state ; the more concentrated and penetrating it becomes, so much more is found to observe, to understand and to marvel at. Normal labour is no exception to this rule. Many people think the Norfolk Marshes dull ; they abhor the silence, so they bring gramophones and regale the voice of God with ragtime. These are they who love to be with me on the Jungfrau Jock and count the roars of avalanches and say, "Stupendous," while I say, "Dead ends falling off dead beginnings." These are also the people who find normal labour dull, but who are thrilled by a forceps operation, a post-partum hæmorrhage or a face presentation. If only they would look closely into normal, natural labour, observing every change in the mind and body of their patient, how much they would find that is of absorbing interest, and how all-important Nature would become.

The conduct of labour must be dull to the attendant who sees nothing in it ; it is a waste of time to be with a woman if there is nothing to do ; why sit there while she groans her way through the long hours of unavoidable pain ? If these hours are used sensibly, every word spoken, every smile, every facial expression and every uterine contraction will be found to contain an indication for comfort, help or support. You will notice the change in tone and expression of the spoken word—the flippant courage of the early first stage, or the anxious pleading ; the laughter of the first stage fades to a tired appreciative smile as the cervix dilates, and in the second stage you see the real nature of your patient. Her face tells you the variations of her emotional state ; from it you estimate her control, her fear and her ability to relax, and from her uterine contractions you learn of progress and the correctness of the mechanics of her labour. No two are alike, and there are a hundred other things to know ; every minute of labour has a fund of fascinating information waiting for the keen and concentrated observation of the physician who can piece together the varying phenomena, both mental and physical, and so find the means of help and encouragement his patient requires. Such observation enables an accurate estimate of the personality of the patient to be made. Does she need kindness or enthusiasm, firmness or control. Where her walls appear to be giving way they can be reinforced.

Hear from women who have experienced this truly human attention what aid it gave to them ; I suspect you will visualise their labours as something almost unbelievable. But do observe whether

your patient wants you there or not ; some women dislike intensely the presence of anyone at all ; a good many do not want the doctor until they feel they must have him. Tactfully find out why, if you can. It may teach you a lot about your patient that you had not previously suspected.

In your observations remain sympathetically cheerful ; good cheer is a blessing without disguise ; not hilarity and not a giggling futility, and not as I once heard a medical man greet his patient, " Ha, ha ! Cheer up, old girl. You've got to go through hell, but I'll go anywhere with you, so keep smiling. Ha, ha ! " I said that we would hate to detain him if he would like to go on ahead.

There is, however, as in all practical work, a margin for common sense and reasonable tact. Such an exhibition of mental inaptitude is worse even than the long face and silent insinuation of tragedy. It is so easy to misunderstand the state of a woman's mind and the nature of her thoughts. A violent physical effort is not infrequently attended by demonstrations of determination or exasperation, and its aftermath may well be exhaustion or a transient expression of despair. These are not always true indications of the condition of a woman in the second stage of labour. Between contractions we often hear, " I am sorry to be making such a fuss, but I really cannot help it." A kindly word of cheerful encouragement goes a long way at this time ; I should be careful, however, not to be too sympathetic. Profound sympathy presupposes suffering, and may therefore act as strong suggestion that suffering is necessary.

Many years ago I was brought to my senses by a woman of twenty-two years of age who had appeared to be in such a state of anguish that I felt genuinely sorry for her and contemplated the means of relieving her from her pathetic state. She caught an expression on my face as she half-opened her eyes, and to my astonishment and shame she patted my hand and reproved me, saying, " Cheer up, doctor ; it's nothing like so bad as that ! "

During second-stage contractions, enthusiastically encourage your patient to hard work, to use very ounce of energy so long as the uterus is in expulsive contraction. Wake her up to the conscious reality of her surroundings and be alert to advise her how to get a relaxed outlet and the best mechanical advantage for her efforts. But do not presume that she is unaware of what is going on. Many women retain their sense of humour in a most disconcerting manner. A friend of mine—who will recall this incident if he reads it—was attending a lady of very noble family who was renowned for her beauty and her charm. The second stage was well advanced and she had been working hard and courageously to expel a large baby. My friend, whose professional poise and dignity is exemplary,

was enthusiastically encouraging her to bear down, " Push, duchess ; push-sh, duchess." Carried away by his ardour, tensely exhorting her to expulsive effort, he committed an obvious social error. The room was wrapt in silence as the contraction wore off. Two nurses, an assistant, and the anæsthetist remained poker-faced but embarrassed for Her Grace. She, however, looked up at the anæsthetist and asked with a mischievous twinkle in her eye, " Is Mr. X having this baby, or am I ? "

Offset the tendency to grim despondency with an element of confident cheerfulness. It may not always be congruous, but in the majority, the large majority, of normal labours, it will be a source of strength to the woman in labour, and an indication of the confidence you have in the successful result of her efforts. There is no limit to a woman's courage if you give her faith. A few notes upon labours conducted after the manner described in the preceding chapter will serve as a practical demonstration of its application. It has been my custom upon returning from a midwifery case to record it in considerable detail on the dictaphone. The facts are fresh in my mind, and minor incidents as well as important events to do with the labour are retained accurately without bias or wishful thinking that might result from the happiness of the next visit. It takes only a few minutes, and I recommend it to all who wish to examine parturition and its conduct. Such records are enlightening, and—although sometimes humiliating if they are kept with fearless honesty—much may be learned from them. It is undoubtedly true that for some years many puzzling phenomena arose, and only time and a long series of records threw any light upon these mysteries. I read, with considerable misgivings, some of my earlier cases, realising how much easier the confinement might have been if certain things had been done differently and certain signs had been recognised in their true significance, as they would be to-day in the light of more mature experience. The results have more than justified the investigation, and the criticism of experimenting upon my patients is not valid, for none have suffered any more because of it and an increasing proportion of all cases have unquestionably benefited from it.

When Isaac Newton presented his " Theory of Gravitation " to the Royal Society he did so with a simple preamble, " I beg leave to present to you the results of certain experiments for your contemplation." It is for those who read these things of which I write to contemplate, not to accept or to discard, for if there is anything of value in them, they become worthy of contemplation and even exhaustive trial, if by such attention they may remove the stigma that civilisation has cast upon childbirth. Even such factors as

time and unsuitable organisation cannot be allowed to damn the use of a method which may improve, in the widest sense, the reproductive function of woman, for good organisation will find time if the time is well spent.

If this aspect of parturition is given the attention it merits, all normal labours become many hours shorter, and in the long run take actually less time than labours conducted under analgesics and anæsthetics for long periods. Hospital organisation makes the care of the mind very difficult; space and staff are both found to be inadequate, although I have been given to understand that Dr. Joseph De Lee instructed a large number of his junior assistants at Chicago to take notice of these things. There is nothing that need be considered an insuperable difficulty to a wide investigation based upon this theory. If it were done, I do not hesitate to predict that nothing would obstruct the demand for its practical application.

CHAPTER XV

RELAXATION

I HAVE frequently been asked to write more fully upon relaxation in the practice of obstetrics. It has been my opinion in the past that relaxation is a subject apart from obstetrics and must be learned from those text-books which are intended to set out in full the theory and practice of this most important addition to therapeutics. Edmund Jacobson has written " Progressive Relaxation " ; for those who are interested in the subject, all will be found in this book that the average student or medical man may wish to know. He has also published a smaller book for the lay reader called " You Must Relax." This short book has an application to modern life and is easily readable, and makes the subject clearly understood. Boome and Richardson have published " Relaxation in Everyday Life." This, too, is a comprehensive addition to our knowledge and teaching upon the subject. It deals with the use of relaxation in the treatment of many diseases, and conditions arising from neuro-muscular hypertension.

But in none of these publications do we find a reference to the use of this agent in obstetrics. In previous chapters I have referred to the causes of tension, mental and physical. Observations have been made upon the influence of the sympathetic nervous system during labour; upon the influence of fear upon the sympathetic nervous system, and upon the influence of neuro-muscular hypertension during labour. I have referred to the causes of pain during labour, and the pain-fear-tension complex. It will be obvious, therefore, that relaxation is employed as an antidote to tension ; it will be equally clear that simple muscular relaxation would be useless unless all three of the enemies of labour were vulnerable to its application. The pain-fear-tension complex must be wholly obliterated, for if any one of these three is active, the other two are almost invariably present as well.

What, then, is relaxation in the sense in which we use this term ? It will be found upon investigation that " relaxation " has obviously been the cause of great difficulty and confusion to those who have compiled dictionaries. In one I read, " It is the act of relaxing ; state of being relaxed ; remission of application ; unbending ; looseness." In another, " The action of unbending the mind from severe application ; release from ordinary occupations or cares ; recreation ; respite ; rest ; a loosening or flattening of the fibres,

nerves, etc., of the body ; diminution of firmness or tension, etc., etc." In a third, a more concise definition is given : " (1) A lessening of tension ; (2) a mitigation of pain." But to the man in the street the word means none of these things ; he will tell you that it is any form of employment which takes him to the peaceful and quiet recreation which is most apart from his everyday work. But in the medical sense, relaxation not only means all these things, but many others as well. I suggest, however, that for the purpose of its application in obstetrics, we consider relaxation to be a condition in which the muscle tone throughout the body is reduced to a minimum. We must remember that many of the physiological reactions and the reflexes are definitely commensurate in their intensity to the muscle tone of the body. It is a quality which is variable in individuals. There is a direct relationship between the emotional state and the muscular tone of the body. It is also important to consider whether our physical reactions are secondary to our emotional states or whether, as the James-Lange theory suggests, our emotional states are secondary to our physical reactions. For if we are able to reduce the tone of our muscular system, we know from experiment and clinical observation that the reflexes of the body are diminished in intensity. We also know that the proprio-ceptor influences are much less pronounced in a state of muscular relaxation than in a state of muscular tension. We also know that stimuli arising from the emotional system give rise to a less violent reaction when there is an absence of tension in the muscular system. In fact, Jacobson goes so far as to say : " Present results indicate that an emotional state fails to exist in the presence of complete relaxation of the peripheral parts involved." In another place he says : " It is physically impossible to be nervous in any part of your body if in that part you are completely relaxed." That is not so clear, but in applying this to obstetrics we can say that if the body is completely relaxed, it is impossible to entertain the emotion of fear. That is the important factor, for if fear is absent, then the over-ruling power of the sympathetic nervous system is absent from the pelvic mechanism. I must remind you that this eliminates any excess of muscle tone in the circular fibres of the lower uterine segment, the cervix and the outlet of the birth canal. Complete relaxation, therefore, offers the minimum of resistance to the muscles of expulsion in the birth canal. In " Natural Childbirth " I laid stress upon the short but important dictum, " tense woman ; tense cervix." The converse of this is equally true, " relaxed woman ; relaxed cervix." But this is not all. In a state of complete relaxation, the proprio-ceptor impulses from the muscles concerned in the mechanism of labour are interpreted in their true sense. It

becomes possible to speak of " muscle-sensation " to a woman who is relaxed, as opposed to the term " agony " which similar sensations give rise to in the mind of the woman who is tense.

I strongly urge those who put this method into practice not to associate the dramatic changes which they will notice in their patients with suggestion, mesmerism or hypnotism. There is no relationship whatever between complete relaxation and suggestion. I sympathise most sincerely with one who sees for the first time this new experience. I do not hesitate to record that so startling were the results of this teaching when I first employed it in the practice of natural childbirth, that I became suspicious of myself, although I was aware that no conscious effort was being made to influence the minds of my patients by suggestion or hypnotism. Consequently I consulted one of the greatest authorities upon these subjects, and asked him to examine me and my methods to see whether, by some accident, I was unwittingly employing the use of methods of which I was unconscious. I have never had any knowledge of mesmerism or hypnotism. The examination was most carefully made, and I was assured that there was no relation whatever between the *application of relaxation in obstetrics* and strong suggestion, mesmerism or hypnotism. Jacobson is very keen on this matter, and in his book, " Progressive Relaxation," he gives no less than thirty-two distinct points of difference between relaxation and suggestion.

It is important that I should lay stress upon this question of psychical influence. I have had many letters from both doctors and nurses who have merely waived this whole teaching on one side as being " mesmerism " or " hypnotism." A particular case was from the North of England, where a Sister who is an expert midwife and who has a thorough knowledge of relaxation and all the methods of natural childbirth, went with her patient because of the war. It was late in pregnancy, and the patient decided to continue my teaching, but to invite a certain well-known obstetrician to attend her when in labour, as it was impossible for me to travel so far afield. In due course her first baby arrived ; it was a large infant, and although she herself was nearer to forty than to thirty, she exhibited no distress ; her child was born completely naturally ; the doctor was asked to refrain from giving an anæsthetic, and to his surprise met with resistance when he offered it. He had known of the patient for many years because her brother was a doctor also practising in the district, and he had heard how nervous she was. When the birth was safely over, and the obstetrician realised that he had only been a surprised observer and had taken no part whatever in the conduct of the case, he was inclined to believe that

interested and wrote at once to hear further
member of our profession not been of a tolerant and inquiring nature, he would have broadcast that this was a form of mesmerism ; the whole system would have been damned in that district, for there is nothing more frightful to the lay mind than the mystical application of psychological influence. Now, however, the young mothers of that district demand to have their babies naturally.

An old friend of mine, who for many years was recognised as being one of our greatest obstetricians, sought to practise this method because he believed in the truth of it. He quickly became successful in its application, but in a few months the word went abroad throughout London that So-and-So was using hypnotism. His patients were getting no pain, and often they did not send for him until the child's head was on the perineum. So rapidly did this calumny spread that he found his practice was fading away, and patients wrote to say they preferred more scientific methods. Fearing he might lose not only his position but his livelihood, he had to—or anyhow he did—publicly disown the method, pointing out that hypnotism had never been used, and returning to the employment of anæsthesia and drugs in labour. That was indeed a tragedy, for had he persisted and made it known by what methods his results had been obtained, this great boon to womanhood would have already been accepted in not a few, but in all the teaching schools of the British Isles. Such instances and many others make it necessary to differentiate accurately between relaxation and suggestion.

Before we discuss more fully the teaching of relaxation during pregnancy, there are certain other considerations which demand attention. The attitude of women toward childbearing is variable ; some become profoundly introspective ; they seem to be examining themselves and their condition every hour of the day ; they record the most minute changes in their physical sensations as well as their thoughts. These people not infrequently come to the conclusion that any phenomenon which they do not understand must be wrong. It is not so much that they anticipate evil, but being conscious of the possibilities of abnormality, they search for all kinds of symptoms which might suggest an unnatural state. There are also the women who believe that pregnancy must be accompanied by malaise ; such things as vomiting, frequency of micturition ;

sleeping badly, losing one's appetite and looking pale and wan are accepted by them as usual and quite ordinary. They move about the community with an expression on their faces which says, " Behold, I am great with child ; I demand your sympathy and your care." There are also women who are pleased to be pregnant ; women who want a child and who devote their time to doing those things that a woman should do when she is about to become a mother. They remain conscious of their condition but find it difficult to alter the routine of their lives. They cannot be bothered to do exercises, but they swing their arms from time to time, and walk into the town instead of going by car. They do not like changing their normal and habitual diet ; they eat, therefore, what comes, but perhaps they try to eat less meat or possibly drink a little more water than has been their custom. But their effort to apply themselves to the rules of life is niggardly ; they are unwilling to sacrifice for their baby's sake, yet their hearts are in the right place and they are positive mothers as opposed to the others, to whom I might refer as " negative " mothers. We meet also the enthusiasts ; those who swing themselves to the forefront of womanhood ; who advertise the fact that not only are they about to have a baby, but that they are doing the most marvellous exercises that were ever invented ; they know the books that are written on these subjects ; they give up their whole lives to the perfection of their physique for the purposes of motherhood ; their diet is most meticulously carried out—each portion is weighed according to their increasing weight ; they understand the calorific values of their food ; they take certain preparations which, they are told, are " aids to motherhood," and study all available literature on the modern aspect of maternity. They may be described as the " plus " women who do everything slightly excessively ; they are the enthusiasts whose academic sense of accuracy leads them to believe that the theoretical adjuvants to motherhood are more effective than the true and natural spirit of maternity without exaggeration. And finally, we have the born mothers ; those who are calmly delighted ; those who appear to be able to carry out all the necessary teaching without overdoing it ; those who avoid publicity, but who do their job with a stolid sense which in the long run achieves all that nature intended motherhood to mean. These profoundly level-headed women are fortunately in considerable numbers amongst English women of all classes ; they are sympathetically astonished at the negative women, just as the plus women are enraged at the attitude of those who do not want their babies. In like manner, the negative women envy the natural woman her ability to remain unmoved by these occurrences, whereas they

also consider the plus woman to be demented and distinctly a bore.

But, as obstetricians, we must be conscious of what class or pigeon hole our individual patients fall into, and that is particularly important when we commence our efforts to teach relaxation. Now, strangely enough, there are two classes of women who cannot be taught ; these " classes " are, of course, quite arbitrary, but the women who do not want their babies, who are bored by the whole procedure and who feel they are merely doing a duty and are fed up at having to do this duty, very often avoid any practice of relaxation and become antagonistic to its teaching. Curiously, the other class is represented by the " plus " women ; these enthusiasts ; these active live wires to whom the application of modern science is all-important. They are told the benefits of relaxation, but their reply not infrequently is that it would be quite unnecessary to apply it to them, as they will be able to control themselves when the time comes. They are sure that the whole thing should be conducted in a natural way and they are preparing themselves along natural lines. Very often these women prefer their physical exercises and avoid the careful practice of relaxation.

But the majority of women are in the three types that are between the negative and positive extremes :

(1) Those who are mildly negative—lazy and casual in the conduct of pregnancy ; they have to be kept up to the mark.

(2) The real and natural mother to whom all things to do with motherhood are inborn gifts and who are balanced in the exercise of their instinctive activities. They adjust themselves to the new rules of life without difficulty.

(3) The slightly positive woman, who is so keen to do everything really well that she has to be restrained and carefully educated.

These types will all willingly submit to being taught relaxation.

Now, I am sure it will be readily appreciated by any experienced physician that a rule of thumb method of teaching this subject is quite impossible under the circumstances. We have to use our discretion ; it would be absurd to ask the negative woman to carry out, in exactly the same way, on the same principles, at the same times of day, those practices which we would invite the plus woman to carry out. If we are to get adequate results, we must balance our demands. I have found that complete general relaxation is the ideal to aspire to, but on the other hand it is astonishing how imperfect relaxation may alter the whole course of labour. Possibly an expert like Jacobson or Boome might feel that some of our patients were not relaxing at all in terms of what they believe to be complete relaxation. But if they saw a patient both before and after she had

been asked to relax by her physician during labour, they would realise what a marked difference there is when even a relative state of relaxation is procured. This, I think, is probably accounted for by the fact that a relative state of relaxation is sufficient to diminish the pain of labour—that is to say, to diminish the sensations of labour which are interpreted as pain by the tense woman. I have frequently been told how different the whole thing becomes when the body is allowed to be "slack," and if women have tried to learn relaxation and are able to put it into effect, astonishingly gratifying results are obtained. We know that complete relaxation, in terms of expert practice, is rare during pregnancy; we do not demand it, because those of us who are experienced with women know that if we demanded it, we should not get it. We must therefore aim at the best we can get, knowing that the ability consciously to relax the major tension of the body is distinctly helpful; that the ability, therefore, to mitigate the acute pain that tension gives rise to during labour, creates a state of confidence and of mental equanimity which allows the ever-changing phenomena of parturition to be accepted and understood without loss of control.

I have been asked at what stage in pregnancy instruction in this practice should be started? There again, there is no rule of thumb; if there is the slightest tendency to nervous symptoms in the early months of pregnancy, such as morning sickness, salivation or frequency of micturition, I embark on the early lessons of relaxation at once, providing that there is no retroversion of the uterus or bladder irritation. The effect upon nervous symptoms is very marked in some cases, and certainly worth while in all. If a woman is perfectly healthy and begins to feel, as she should, healthier and happier than ever before, I do not commence instruction in relaxation until the baby has quickened. There is a reality of pregnancy at that time which somehow seems to make a woman anxious to do these things which, having confidence in her educator, she is told will be of assistance both to her and the child. She is anxious very often to acquire a calm; many women believe that their own mental outlook and nervous condition will have a marked effect on the baby during its development. There is certainly some evidence which suggests that they are correct in this assumption, but it is very difficult to be quite sure. What I mean is that the best babies I have seen are the babies who, for the first three months of life, just eat, sleep and have their playtime during the late afternoon; who are automatic little human beings growing into more mature life without hesitation, and apparently without questioning the rightness of their own conduct; who are the children born to mothers who have practised most successfully the art of relaxation.

We cannot altogether suggest that this is because of relaxation ; it may be that such babies are born to women who have the ability to practise and obtain complete relaxation ; it may be that such women would have such babies anyhow ; we cannot tell. Certain weight is, however, added to this possibility when we realise that another observation points in the same direction. The troublesome, sleepless, " green nappy " babies ; those who are querulous and windy and who do not seem to know what peace means, are not infrequently born of the negative women—those who do not and will not practise relaxation and calm during pregnancy or labour. These babies are often those of women whom we have had to anæsthetise, to whom we have had to give a sedative drug in order to obtain a relatively painless labour ; those who have been farthest removed from the natural principles of obstetrics.

It is upon such considerations as these that the teaching of relaxation is commenced about the time, or just after, the mother is conscious of the quickening of her child. Most intelligent women can be taught in the remaining months sufficient to enable them to get very good results from their efforts. I fully realise that those physicians who teach progressive relaxation for the purpose of cure in other conditions—or, should we say, cure in pathological states—require six months to obtain good results. In pregnancy I have seen the most excellent results after two months of teaching and practice.

But whenever this instruction commences, I would call most serious attention to the manner of approach that a physician makes to his patient upon this subject. I have been met sometimes with the argument, " Why should I practise this relaxation that you speak of ? My mother did not do so and she has never heard of it, and she has come through her pregnancies safely." And again, " But I have no time to do these things ; I can just do a few exercises in the morning, but after that my day is one long rush, and I cannot undertake to do anything else." Therefore, I suggest to obstetricians who propose to introduce this subject, that they speak of the necessity for a certain amount of rest whilst the woman is carrying her baby, even if it is only for half an hour in the middle of the day, either before or after she has washed up the lunch things, if she is a housewife. It should be pointed out to her that physical tiredness is likely to become embarrassing in the later stages of pregnancy if the habit of rest is not made in the earlier months. It is usually possible to persuade a mother-to-be that a rest of half an hour before or after lunch becomes an easy habit, and the majority will conform to this suggestion. Frequently, I lay stress on the necessity for their becoming relaxed after they are in bed at night, or of

putting into practice those things which they have been taught before they go to sleep. I daresay that this is not very effective, but it does seem to ensure that one of two things occurs : either they practise and carry out the teaching, or they go to sleep soundly and well. This appears to be rather a poor compromise, but it is better than nothing.

When instructing in relaxation, we must be careful not to make a mystery of it. It should be treated in a perfectly common-sense practical manner, and if possible made interesting to the woman so that she understands the " why " and the " wherefore " of what she is being taught. I cannot allow this opportunity to pass without telling you of one experience that I had in the teaching of relaxation. I was invited to attend a lecture given to midwives by a lady who had become keenly interested in this matter, and who was an instructor in one of the teaching centres of the University of London. I had a note from the matron of the hospital at which the lecture was being given inviting me to attend, as she felt that I would be able to supply the answers to certain questions that might be asked afterwards. I felt it was rather a busman's holiday, but on the other hand I was interested to know how this teaching was being conducted, particularly by one of whom I had never heard and whose work had never come to my notice. This was nearly five years after my first publication on this subject. The lecture itself, as such, was perfectly all right in an elementary way, but the interesting part was after the lecture, when she called from amongst her audience a protegée whom she had brought with her and who was trained in relaxation. A couch was hastily brought into the room, and the model flung off her ordinary clothes, under which was revealed a gym. tunic. She leapt on to the table like a well-trained fox terrier. She lay rigidly, with her legs stiffly extended and her arms by her sides ; she was then demonstrating, we were told, a position of tension. The induction of relaxation commenced then to take place. Now, the lady who was " inducing " the condition of relaxation proceeded to explain that the first essential was to get controlled, regular, deep breathing. That is, of course, all right in its way, but she herself then proceeded to rise up on her toes, raise her arms, and hiss with inspiration, at the end of which she said, " H'in," and then as she let herself go, her body rippled down over her patient, expiring with a loud huff to the tune of " H'out." This went on with increasing fervour—strange noises, strange rippling movements of the body which appeared to be as elastic as a skilled ballet dancer. Her fingers, tendrillous and long, quivered above the prostrate form of her victim ; her piercing eyes gleamed brightly, and gazed deeply into those of her patient ; her

mouth moved feverishly, as if she were muttering the formula of some ancient incantation. This ridiculous exhibition was an effort to induce what we were to believe was relaxation. A colleague of mine who was sitting near by turned to me and raised his eyebrows ; someone sitting behind me slid over my shoulder a piece of paper on which was drawn a witch's tripod with a steaming pot under it. That was the general impression that this lady gave us. There was very little real instruction ; it was rather like a conjuror putting a small ball of tension into a hat and bringing out the silk handkerchief of relaxation. There was nothing to teach us how it was done although the model appeared to be quite skilful. I was introduced to the lecturer afterwards who said how nice it was that medical men should at last be taking some interest in the subject of relaxation during pregnancy. She hoped that I would try it, and gave me her name and address, so that should I find any troubles she would be only too pleased to assist me to get better results ! I assured her most conscientiously and most sincerely that she had been of far greater assistance to me than she realised. That was indeed true ; I had seen a practical exhibition of how not to deal with women ; a practical exhibition of what not to do when endeavouring to instruct in relaxation. We are all unlikely to induce wisdom by appearing foolish.

Therefore, I strongly suggest that this thing be treated in the most matter of fact and practical way, and that your patients may be given your confidence in order that you may be honoured by theirs.

How, then, shall we start to give this instruction ? Perhaps the best thing to do is to place your patient on a fairly wide bed or couch, and put her into such a position that she feels that she requires no support of herself to remain in that position ; that is to say, the head should be resting slightly on one side, or supported by a pillow. The hands should be lying by the side, and the legs (I personally prefer them to be uncrossed) lying loosely on the bed. Do not have a soft bed with a spring mattress ; you cannot relax if there is a spring mattress jumping about underneath you or if your back is bending this way and that. A good examination couch is the most satisfactory article of furniture to use, or the floor if no hard bed is available.

The first thing to do is to try to teach your patient to recognise muscle action. You cannot be conscious of relaxation unless you are conscious of muscle tension. This is usually quickly done. I tell the patient to let her arms and legs lie as loosely as she is able to : " Try and avoid moving your toes, and do not waggle your fingers about. Just lie absolutely still and loose on the sofa, and let me have your right arm and let me have it entirely ; that is to say,

do not take any notice of what I am doing to it and do not try to help me, because any effort you make to help me is going to do more harm than good." I then take hold of the elbow and the wrist and raise the arm just off the sofa. I tell her I want her hand to drop so that there is no life in it at all. It is extraordinary how many people cannot drop their hand; they let their hand slowly fall, and then wriggle a finger or waggle a thumb. This is practised until complete relaxation of the hand is obtained. The method of practice is as follows: "Now I am going to lift your hand, and I want you to let it drop absolutely as if it had no life in it at all." This sometimes takes quite a long time to do. Then I put my finger across the back of the hand and say, "Raise your hand very slowly, and at the same time you will feel my finger pressing it down. When you do that, realise what muscles are trying to raise your hand." At the first movement of the muscles of the forearm in the effort to raise the hand, I usually say, "Let it go" or "Relax" or some word like that. We do this several times, and I point out that it is the muscle of the forearm that is trying to raise the hand, and not infrequently my patient observes that as soon as the effort to lift the hand is made, she can feel the muscles tightening.

This instruction is then extended to groups of muscles, allowing them to become slightly tense and then definitely relaxed. It is extraordinary how quickly the average woman is able to relax her arm once she understands the muscle tension and the pull, but it takes considerable practice before she becomes expert. I then ask her to do the same thing with the left arm. If she acquires the general idea, she must try relaxation of her legs. When she comes to see me next time, I assist her to improve the technique.

And so, with an intelligent woman, one can work through the whole of the body by first pointing out what tension of the muscle feels like and then endeavouring to relax that tension. This applies not only to the arms and legs, but to the trunk, the abdomen and the chest. When relaxing the abdominal muscles, particular attention should be called to the musculature of the pelvic girdle; in the same way the muscles employed in breathing should be clearly explained. Respiration can be demonstrated to be either tense or relaxed; if a deep breath is taken, certain tensions become apparent in the diaphragm, the ribs, and so on, and if a normal breath is taken some of those tensions are not present. In relaxed breathing, the inspiration and expiration should be without tension; there should be no restraint in expiration. Breathing during complete relaxation is perfectly smooth, and in many cases almost inaudible, but it is quite adequate to carry on all respiratory

functions without either shortness of breath or the necessity of occasional deep breaths or sighs.

A word about the forehead. The wrinkled brow must, of course, be avoided. Relaxation of the face as whole is extremely important, and I am quite sure that any woman who is capable of relaxing her facial muscles will go through labour with ease. I find with women that it is probably the most difficult part of the body to relax ; it may be because they depend upon the expression of the face for their vitality and for a good many of those other feminine instincts which are attractive. Women must be taught to relax the muscles around their eyes, the muscles of the cheeks, the mouth, and in particular the eyelids, and—if they are really good triers—the eyes too. The cheeks and the jaws relax quite easily if the subject is properly instructed. We have to remember that a woman does not look her best when her face is relaxed ; I always point this out to her, and tell her that I have no desire that she should look her best just then ; I want her to be her best. A few women have definitely refused to allow their faces to become relaxed in my presence ; they have been self-conscious and have promised to try when alone in their room. If a woman is wearing false teeth, I suggest that it would be wiser for her to remove them rather than try to relax her face with them in ; this is because many dentures are not absolutely safe without some support from the facial muscles ; one does not want to see them half in and half out when the muscles of the cheeks and jaw are relaxed. After a time the woman who practises relaxation of the face finds it very much easier to practise complete relaxation of the whole body.

The detailed instruction of relaxation is much too big a subject to include in one chapter of this sort, but I would strongly recommend that the books I have already mentioned should be studied on these points. Above all I would recommend common sense ; human understanding must definitely be present in the teaching of relaxation ; there must be no suggestion such as " Now you are relaxing beautifully," or " Now you will find that your breathing is not controlled," or " Now you are sinking through the bed and soon you will have that beautiful feeling of alienation from all the troubles of life." That sort of thing is not required. This relaxation must be a perfectly practical, unimpaired application of a physical state ; until that state is arrived at there is no necessity whatever to add any frills and fancies.

Do not ask your patients to let their minds become a blank ; do not talk about their minds to them ; get them physically relaxed and their minds will take care of themselves. Several patients have told me that it is very difficult for their imaginations to become

quiet; that they go through all the events of the day directly they try to relax. That is, of course, an indication that their relaxation is incomplete, and therefore do not urge them to avoid thought in any way, because the avoidance of thought is one of the most active mental principles that they could possibly adopt. Urge them, rather, to get on with their relaxation, to practise it more thoroughly, and to try and recognise what groups of muscles are remaining in tension. You must remember that no emotional state can be present if there is real physical relaxation of the body itself. That, I think, may be accepted as a fact, and will probably be best appreciated by those medical men who can bring themselves to practise this invaluable aid to good health, particularly people who work hard at all times of the day and night.

So much for the teaching of relaxation during pregnancy. According to the method of your practice, and according to the type of practice that this is being conducted in, so the patient will be seen frequently or not so frequently, but my own impression is that most patients are not seen often enough. That is, of course, only another reference to the inadequacy of our present administration of obstetrics, particularly in public institutions.

Having acquired for your patient some degree of relaxation, do not be too ambitious, but you will occasionally have the absolute delight of finding one who becomes adept at it. When you do, if everything else is normal, call in your friends, gather your students around, collect up your nurses, and let them come and see a real natural labour. I have now had many such cases, and some of them have appeared to be lying in a trance from the beginning of their labour until the end. It is not that they were in a trance, but their relaxation was so complete that they became almost oblivious to the fact of parturition, and at the end of the first stage relaxation *during* the contractions of the so-called pain-period of labour enabled them to pass through it without discomfort. They then automatically brought into play the muscles of expulsion; they continued to lie in a completely relaxed state *between* the contractions, but woke up in a muscularly active condition to the full participation in expulsive effort. As soon as a contraction had worn off, these women again sank into an amnesic, almost anæsthetic state, for there is no doubt that general relaxation intensifies that amnesic condition during the second stage of labour of which I have so frequently spoken.

The idea of anæsthetic and pain to these completely relaxed women is quite absurd; it does not enter their minds; they have no demand for it; they do not have pain, but they are conscious of muscular effort, particularly during the second stage. They can

understand what is said to them, they listen, and they carry out instructions. After the baby is born and they awake once more to the full floodlight of motherhood, their physical freshness, the complete absence of shock, and their inability to recall the incidents of their labour is most marked.

But in the average labour we have slightly different circumstances to meet. A woman is perhaps willing to try and relax during her first stage contractions. I do not advise that during the first stage of the average labour, a woman should be asked to relax the whole time unless she wishes it, and unless she has overcome all the difficulties of progressive relaxation and is adept at the art. In the ordinary labour, I prefer the woman to be awake to her general condition ; I prefer her to be able to listen to instruction and to learn what is going on, and to be able to recognise the encouragement given her by those in attendance. Immediately there is a sign of a uterine contraction, she must at once apply herself to the task, and relax to the very best of her ability. During the first stage of labour, relaxation must be practised during the uterine contractions ; between them I do not ask for continual relaxation ; a quiet restfulness is sufficient. I disagree with those who advocate certain definite positions during the first stage of labour. I have seen them in many books, and I regret that I cannot agree with those who teach the hanging on to the bottom of the bed, standing on tiptoe, stretching the pelvis, the opening of the pelvic brim, and a variety of other suggestions of those who put more stress upon athletics and exercises than upon the neuro-muscular relaxation. Undisturbed peace should characterise the first stage of labour without mental or physical tension, with every happiness that a woman can be given, with every urge to confidence in the right outcome of her parturition.

Relaxation during the first stage contractions has the most astonishing effect. Very often, quite at the beginning, after the laughter and merriment that so many girls start their labours with has worn off, and as the mental attitude becomes more serious, it is necessary to maintain control, both physically and mentally. Relaxation is of the greatest aid at this time. If she has been sympathetically treated and well instructed, she should have no difficulty whatever in avoiding all pain during the first stage of normal labour. It may be, as I said before, that it is not easy for her, during the last part of the first stage, to avoid discomfort, but we must remember that the calmer she is, the more relaxed she will become. It is difficult to relax when under the influence of strong emotional disturbance.

During the second stage the whole picture alters. You do not

require, nor could you obtain if you wished, physical relaxation during the second stage of expulsive contractions. The idea of Nature here is that the door being widely open, and the birth canal being fit to pass the baby through, the muscles that can assist in that purpose are brought into play, and brought into play very vigorously. This entails real physical exertion, and after each second-stage contraction you can see plainly that the woman is out of breath ; deep breaths are drawn, and the effort is just as great as any other muscular exercise of rather a violent nature. Therefore, it is between the contractions that we wish to have complete relaxation, for that is the most effective manner of reconstituting the muscular power. There is very little, if any, discomfort in the average second stage of labour that has been properly conducted. Many women who have felt it a hardship that they are unable to help, who have accepted the teaching that they can do nothing during the first stage and have relaxed and allowed the uterus to do its own work, have become bored and not a little tired at the feeling that they have done nothing. When the second stage begins, they are told they can help ; a tremendous sense of relief very often fills a woman's mind as she realises that not only can she help, but the greater effort she applies to it within reason, so much the greater sense of comfort she gets. There is no pain with a good honest second-stage expulsive effort until the first sense of dilatation of the perineum is appreciated. I am not, of course, speaking of those abnormal cases where there are large masses of piles which come down as the head stretches the anterior wall of the rectum, but of the normal, unimpeded case where there is no pathological condition present at all.

When the head gets down on to the perineum a woman often finds it difficult to relax, because she gets that sense of bursting. There is no doubt at all that if a woman does endeavour to resist when the head arrives on the perineum and contracts her pelvic floor and squeezes up the vulva and the rectum, she runs a very good chance of having not only acute pain but also, by increasing that tension, of a torn perineum. If a woman can relax well at that stage, if she can be told that that sensation of bursting is a myth and that the head will not tear the perineum if she is relaxed, it is astonishing how large a baby will pass through what appears to be a small vulva without any tear to the perineum at all. If, between the final second-stage contractions, after the head has adequately crowned, you can persuade the woman to remain relaxed, the complete absence of difficulty with which the head can be produced is surprising. I am sure that a large number of torn perineums are due to the effort of the woman to resist the oncoming head by

violently contracting the muscles at the outlet. When a baby arrives under these conditions the woman, being conscious and not filled with anæsthetic, realises only when she hears her baby cry that it is born. A child passes through a relaxed vulva with almost complete absence of sensation to the mother. There is no doubt that with relaxation of the vulva there is also a temporary anæsthesia of its sensory nerves. Should a tear be unavoidable, one or even two stitches can be put in carefully and without any feeling whatever. The woman is again asked to relax whilst they are being inserted. I have mentioned this before ; it must be done at once because that anæsthesia of the vulva disappears in a few minutes.

After the baby is born, in the third stage, there is no need for relaxation. Here we get the beautiful tension of satisfaction. The sympathetic nervous system sweeps in with all its joys and its pleasing emotions, and so there is no desire for relaxation and no need for it. There is no necessity to relax during the third stage because the sound of the baby and the consciousness of the mother, the absence of hæmorrhage and the general sense of delight, seem to be all that is required to make the uterus get rid of the after-birth as quickly as possible. Not infrequently a mother will expel the after-birth without any assistance from the physician, and this, I think, is possible particularly when there is an absence of shock in cases which have been carried out under good general relaxation.

I do not wish, in concluding this chapter, to encourage anyone to feel that relaxation is the whole secret of natural childbirth. It is a most important adjuvant, but without education and without an understanding of the phenomena of labour, relaxation by itself is really not effective. I have heard natural childbirth spoken of as " labour under the influence of relaxation." That is quite untrue ; this is an adjuvant to labour, and is one of the means by which we are enabled to relieve the natural woman of the contrary influences to which she has been subjected by culture, civilisation and ignorance. Perhaps I may add that the obstetrician himself would be very well advised to become adept at relaxation. Not only would he be more competent to teach, but he will find that during those long hours of waiting he will retain his strength, his mental acuity and his manual dexterity very much more adequately if he is able to relax instead of remaining tense with anticipation during the labour he is attending.

RELAXATION

POSITION. Supine, on wide couch or fairly hard bed with a small bolster under the head and shoulders, and a smaller pillow or cushion under the knees. *Arms by the side, elbows half bent, hands half closed, knees slightly separated, i.e., all joints so far as possible in semi-flexion.*

DIRECTIONS TO PATIENT. Relax the :

Shoulders by thinking of them " opening outwards."

Arms by imagining them falling out of shoulder girdle, " as though they did not belong to you."

Back—sinking through couch on to the floor.

Legs, knees and feet—falling outwards by their own weight.

Head—making a dent in the pillow.

Eyelids—half closing by their own weight.

Face—as though hanging from the cheek bones.

Jaw—hanging loose.

Give about two minutes to each group, and take them in the same order each time.

Breathing. Let the chest wall collapse with its own weight on expiration, and pause for two seconds (or until you want a new breath) at the end of expiration. Get a feeling of general relaxation, letting all the joints give a little more with each outgoing breath. *Do this six times.*

Note the train of sensations in the limbs—usually heaviness followed by lightness or " floating " ; faint, transient pins and needles in the hands ; feeling of warmth passing up from the extremities.

A pleasant, torpid, day-dreaming state generally ensues (as in sun-bathing) and any tendency to directed thinking should be deliberately diverted into a day-dream.

Duration. Half to one hour. (The sense of the passage of time is often lost or blunted.)

Sleep is not aimed at and, for most patients, muscular relaxation seems to be more refreshing. But many insomniacs can put themselves to sleep during the day by relaxation, and the ability to do so gives them confidence at night.

The patient should get up slowly at the end of relaxation and stretch. Jumping up suddenly is sometimes followed by faintness.

CHAPTER XVI

RECORDS OF CASES

It has been my custom to record upon the dictaphone as early as possible after the completion of a labour the manner of its conduct, any unusual or outstanding features, and the behaviour of the woman. These notes are usually made immediately upon my return home. The case is then fresh in my mind and the sequence of events that has occurred is uncomplicated by lapses of memory for apparently insignificant detail.

This method of making notes has one great drawback ; the spoken word does not always read well. Consequently these unprepared reports which have been typed verbatim have been carefully preserved from the risk of embellishment by an endeavour to rewrite them in better English. To a large extent their value is in their spontaneity, and therefore any phrases which offend the eye must be accepted for the value of their truth, and I hope not condemned for their lack of literary finesse. Neither are these records intended to convey an exposition of the perfect conduct of labour from the academic obstetric point of view, but rather to emphasise the advantage of observing the various phenomena of labour and the relatively felicitous results that may be obtained by endeavouring to understand and assist Nature. The justification for patience and the abhorrence of interference may be found in them. These records will serve their purpose, even though they demonstrate the imperfections and shortcomings of the obstetrician who made them, for they also illustrate that satisfactory results to both mother and child may be obtained by this method of procedure, although far from perfected.

These fifteen cases are all recent, and are intended to be typical of any similar number chosen from ordinary routine natural labours. They exhibit most of the emotional changes, and do not hide the difficulties encountered.

At 12.45 on Christmas morning, Mrs. —— had her first baby. I was rung up at about 7 o'clock the previous evening and told that she had gone into the maternity home ; that the contractions were coming about every five minutes ; that she was relaxing for the contractions very well indeed ; that she was having no discomfort, and expressed the opinion that there was no need for me to go.

At 9 o'clock I rung up and found the pains were coming every five

minutes, so I went along. It took me half an hour to do my usual ten minutes' run, because of the fog which was extremely thick; ice was on the road, my windscreen was frozen up, and altogether it was very difficult to get along.

The sister in charge told me that when Mrs. —— got into the home, she found the head high, but when I examined her it was down below the brim, in fact, I could hardly feel it at all; it was well in the pelvis, and on a rectal examination I found it was only just about one inch into the pelvic cavity from without. She was getting good contractions; my opinion was that they were contractions which should have fitted in with the second stage, but she told me she had no inclination whatever to help them, and by relaxing in between times she was extremely comfortable, got on with her job in the most excellent way, and did everything she was told. She seemed very happy; she occasionally had a sip of cold water which she preferred, and all went well.

At 10.30 I was quite sure that the contractions were second-stage ones, although she had no sort of urge to push down herself. So I told her to take a deep breath when the next one got to its height, and to lean on it; that is, to hold her breath and let herself contract in the upper storey so as to press down the lower. She understood that well, and told me it gave her a good deal of comfort; she liked the feeling, but her back was painful. Now, this pain in her back was not a sacral pain—the usual area, but it was more in the region of the second and third lumbar vertebræ, and when I pressed on those, she said it relieved it a little but not altogether. She then turned over on to her back, drew up her knees and pushed against my hands—or rather, my hands on one side and sister's on the other —held her knees and pulled on them, at the same time opening her legs as widely as she could. With the first contraction the caput appeared at the vulva, but after this progress became very slow. I watched several contractions carefully, and could see no obvious reason for the delay, but noted that she was making her back concave when she pushed down. Since that is an unnatural position, I showed her how to produce convexity of the back, which she said was more comfortable. That worked well, and it was interesting that after three or four contractions there was a loud, dull, crack in her back. I asked her whether she had felt it, and she said she had, and from that moment she had no further pain in the back at all. She herself said to me, " That seems to have cured the pain in my back." This was, as I say, interesting, because I am persuaded that a good deal of the pain in the back during labour is owing to the posture in which the patient lies and the posture adopted during contractions. In this case I have little doubt that

the crack was a similar one to those the osteopath will produce when in certain positions he endeavours to relieve the back from strains and stresses produced by various conditions.

There was no pain whatever from that point in any place at all. The caput was a very large one, she worked well, and the head came down. At about 12.30 the head crowned. I told her there was no hurry, and as it gradually dilated the vulva, I asked her whether she was quite sure she was having no pain, because there was the anæsthetic apparatus by her side, and she should certainly take a whiff if there was any discomfort whatsoever. She replied, " No, doctor. There is no pain ; it does not hurt at all, but I must say it is a nasty feeling. It feels as if the whole of the end of your body is opening, but it does not hurt."

I could see then that she was having a very big baby ; it was a big head anyhow ; the caput was a large one. That, I think, would have been accounted for by the fact that she had, she told me, since the previous Thursday, had quite considerable leaking from the front passage, that she had thought it was all right and normal so had not done anything about it. But there is no question, of course, that her waters had, to a great extent, leaked away, so that she was having a practically dry labour. There was no bursting of the waters, or anything of that sort, later on.

Up to this point she had only asked me one definite thing ; in fact, she had only said one thing seriously, and that was, " Doctor, is everything going on all right? " I examined the baby, and assured her that everything was going on magnificently, and directly I told her that she went on with her work for a considerable time, quietly, confidently and without any discomfort, resting assured that this was Nature's plan for her to produce her first baby by hard work, but not necessarily with pain.

Eventually the head was born. It really was very tight, and I told her to be sure not to push down or do anything at all, but to let me know if it hurt. I slid my finger round the neck, and to my horror I found there was a loop of cord, very bulging, coming down beside the head. I thought it would probably be all right, but I found it was not pulsating, so I though it would be wise to have the child fairly quickly. However, when we came to put a little pressure on the fundus and I asked her to push down, the shoulders were absolutely immobile. I could not move the baby anyhow ; she waited until there was a good contraction and did her very best to move it, but nothing happened. In the meantime, of course, the baby was getting blue-black, and things were not looking too good. I put my finger inside to the right shoulder, and found that the elbow was pushed back and the shoulder tucked back in such a way that

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it could not fold forward on to the chest as one likes them to when they are big babies. With my finger I gradually levered the right arm of the baby forward until it slipped round to the front of the chest. Then the shoulder was easily pushed forward ; the vulva stood it very well, the perineum was unruptured and the baby was carried out anteriorly round the pubis. There was no tear or scratch.

The baby having been born, the head unfortunately remained absolutely blue, and the body an unhappy grey. It was quite flabby and immobile. I suppose the whole thing had taken about a minute and a half, although those minutes always seem like years. Its heart was not beating, there was no evidence of respiration, it was just lying there, a little flabby mass on the bed, and for a moment I had that cold chill we get when we cannot feel the baby's heart beating, or see the slightest sign of life.

With my fingers on the right side of the chest and my thumb on the left, I very gently compressed the ribs and let go. I did that about three times and I felt the heart give one or two hesitant beats and the child gasped. The baby came round quite well, but before it came round one had to be very careful not to convey to the mother that we had been anxious about the baby. Soon it was crying lustily and she was extremely happy. The uterus, immediately the baby cried, went down into a hard lump ; there was no oozing of any sort whatever and within fifteen minutes she pushed her own placenta, and I do not think she lost an ounce of maternal blood.

There is one point which I might draw attention to here. After the head was born, although I had warned her of an entirely new sensation, I told her not to be frightened, that everything was all right, that the head would come out and be resting outside her on the surface. She was momentarily frightened at that, and squeezed herself up tight, so I asked her not to do that, and she said, " I must do that ; it is hurting now." I told her to let herself go and then let me know whether it still hurt. She relaxed in the way in which she had trained herself, and looked at me and smiled, with this baby's head still in the world without its body. She went on smiling ; all the pain seemed to have gone, and she said in rather a grumbling sort of way, " Yes, you're right again." And she had no further pain, although a relatively large baby was born with difficulty and manipulation. Her description of it was, " About the hardest work and the most boring affair she had ever known," because she was so anxious for the baby to come. It was, as a matter of fact, a very slow labour.

It was a labour which taught me once again the advantages of

correct posture and patience. Give the patient confidence ; give her plenty of courage ; maintain complete control and success will come. I do hesitate to think what would have happened had anyone tired of encouraging Mrs. ——, and endeavoured to produce the baby when the caput had been showing for about an hour. The result of putting forceps on to that huge head must have been trouble and damage. Those shoulders refused to budge without being put into their proper position. I think there was a picture where tragedy was waiting for interference ; where interference would have unquestionably meant a tragedy.

I asked her if she would like to have been unconscious of it all, and she said, " Why, if I had not known what was going on I should never had any reward for this long time that I have been bringing my baby into the world." I thought it was a most sage remark, and I was pleased to hear her make it.

Mrs. —— had her baby at 4.30 this morning ; an event which has given me a considerable amount of satisfaction. The history is an interesting one.

She is thirty-four now and has been married about ten years. Eight and a half years ago she became pregnant, and was told that she was going to have twins. She was not informed of this until she was seven and a half months' pregnant. At eight months, the physician in charge decided that for some reason or other which is rather obscure—because she was perfectly healthy—the babies must be brought into the world. He therefore commenced a series of methods of induction, none of which were effective at first. Finally, bougies and packing were introduced, and she did come into a weak labour a month before she was due. The result was that twins, 3½ lb. and 4 lb. respectively, were born, but what a birth ! Her weak and ineffective labour pain went on for twenty-four to thirty hours, and there was not, apparently, full dilation of the cervix of the uterus. But forceps were introduced, and the 3½-lb. infant was heaved into the world through what, from the history of the case, must have been a partially dilated cervix. There was extensive laceration of the outlet, and the child was dead. The second baby was also a vertex, and that was pulled through the previously stretched canal with the result that it was born alive. It was a poor, wizened little creature, and survived, and at the age of eight and a half years is unfortunately not normal ; that is to say, he is mentally deficient.

About five years ago, this lady came under my care and told me something, but not much, of her history. She came to me complain-

ing of pains in her back and trouble with menstruation. She pointed out to me that she could never have any more children. She was in a nervous condition, although she was an extremely well-made and athletic type of woman who had in fact been expert in some forms of athletics in which women take part. She came to see me from time to time, and she did not really get very much better, but three years ago I felt that her boy was being a very great source of worry to her. She told me that she really had the most serious pain in the lower abdomen and in the back, and sometimes had to go to bed at the menstrual period. We tried over a long series of menstrual cycles to relieve this condition, but nothing improved it, and about two years ago she told me she was getting a very acute dysmenorrhœa and that coitus was almost abhorrent. There was definite psychical disturbance; examination revealed an acutely tender lump in the right fornix, and a palpable ovary in the left fornix made me suspicious that both her ovaries had made their way down into the pelvis.

So, eighteen months ago, she was operated upon, and the ovaries were found very low down. They were quite small, infantile, fibrotic, and looked useless. We hesitated to tell the husband that we had found serviceable ovaries there, and we assured him that it was unlikely that she would become pregnant again, although we hoped it might be possible now that the ovaries had been replaced in their normal position.

Within nine months she was pregnant and all went well up to a point. She was very nervous and alarmed about it all, and at ten weeks started a violent hæmorrhage and it appeared that she was going to miscarry, but with injections of corpus luteum it seemed to quiet down for a time. After a few weeks she had another hæmorrhage, and this time it was so insistent that we had to keep on with corpus luteum extract right up to the end of the sixth month, because as soon as it was stopped for a fortnight or three weeks there were evidences of disturbance again.

But at six months everything settled down, and she came to term, but there were difficulties again at about eight months. She and her husband asked me to call and discuss the question of Cæsarian section that was going to take place. This was rather surprising to me in a way because I did not feel myself that there was any need for a Cæsarian section, but they both informed me quite firmly that the doctor who had operated on her for her twins had told her that there must never be any question of her having another baby, or if by accident she became pregnant again, the baby must be removed by Cæsarian section, as it was quite impossible for her to give birth to a child in the normal manner. This they had accepted,

and she had lived in this knowledge for eight and a half years, believing that she was physically so deformed that it was impossible for her to have a baby normally. That had, as it often does, made a great impression on her mind.

I X-rayed her at thirty-four weeks and found a very good picture of an android type of pelvis, with plenty of room, absolute symmetry and the baby's head in a satisfactory position. I pointed out, therefore, that I saw no reason why we should embark upon a second abdominal operation and do a Cæsarian section. This not only gave rise to considerable anxiety on the part of the husband and wife, but there also appeared to be quite definite doubt as to whether my judgment in this matter could possibly be right after their previous experience. "How was it," I was asked, "that these two very small children could have presented such difficulty through what you call the birth canal if I am not small?" I pointed out that there were several reasons for that, and that although I was not there at the time I was quite willing to believe that under the circumstances I had had described to me, it would naturally have been difficult to produce both the children without injury to them and to the pelvic tissues. However, they were very adamant that great care should be taken and I didn't feel that there was complete confidence at the time.

So a month later, at about thirty-seven weeks, I X-rayed her again and found a small baby, the head in good position, and so far as I could see there was no reason why there should be any trouble. But clinically it was very difficult to get the head down into the pelvis. I must say that it was then lying occipito posteriorly, but by rotating the baby and using every known method it was quite difficult to get the head to go down into the pelvis at thirty-seven weeks; that is to say, of course, to get the head to fit in to the brim of the pelvis. I told them that although the head did not at present go down into the pelvis, it was not in any way unusual, but I felt sure it would eventually go through easily and I thought there would be plenty of room.

The question being so very important, and the woman being worried about her poor little lad of eight years old, and fearing, above all things, instrumentation and interference, she did feel that it would be wiser to have the baby by operation of Cæsarian section rather than risk the labour in a pelvis that was not altogether free of suspicion. So I suggested that we should ask a colleague to see her and give us his opinion, and abide by it. "If he thinks a Cæsarian section is necessary, it shall be done." So they went to see him about a fortnight before the baby was due, and he said that although it was quite likely to be a tight fit, she had not got a

small pelvis; it was a symmetrical one, and although the head could not be pushed down—that, of course, was at thirty-eight weeks—he believed it would go through. He advised that she should have a trial labour with everything in readiness for a Cæsarian section should the head not engage properly.

So this was prepared for, and on the Sunday morning at 1 o'clock Mrs. —— rang me up and told me she was in labour. I told her to go to the maternity home right away, and that I would follow on. So she went along, and I followed her at about 2 o'clock, and found her having very good first-stage contractions, and at about 2.15 I examined the abdomen

Now, when she had arrived in the home, the sister, who is a very competent observer, made a note that the head was high, and to my joy the head had rotated to the anterior position and was passing quietly and very pleasantly down into the birth canal.

So she went on in her labour quite well; she complained of a considerable amount of discomfort at the bottom of the scar of the operation for the replacement of her ovaries; she said there was a drag there which hurt her considerably, but apart from that and a certain amount of "crampy" feeling in the abdomen, there was not much discomfort.

Labour progressed in the normal way; I sat with her from time to time, and about three hours later we moved to the labour ward, into which she walked quite easily and without any trouble. Shortly after, there was evidence that the first stage was getting near its close. She began to feel a certain amount of discomfort low down in the back, which was different from any previous sensation. I pointed out to her that if she would put up with one or two of those twinges in the back—which, by the way, entirely disappeared when I pressed firmly over the sacral region—they would pass off quite quickly and that it was just a phase in the labour.

Then the really interesting part of her labour commenced. She had a prolonged and good contraction, lost her smile, and became a serious woman starting her second stage. She flung her head back, and when I looked to see whether there was any change at all down below, she said, "Oh, take off those clothes; it is quite impossible to be a lady now!!" She lost all her natural reserve and shyness and the rather unusual refinement of speech that characterised her. She had one or two more similar contractions, and I said, "Now, I want you to draw a deep breath and find out whether you have any inclination to bear down." She tried this and found that it was not only pleasant, but that it was a distinct relief to her just to give a gentle push down when a contraction was at its height.

From that moment onwards I saw one of the most perfect examples of what I have so frequently described as the amnesia of the second stage - the phenomenon which I believe to be so important and to which so little attention is paid in modern obstetrics. She became an entirely different woman. Her natural, quiet voice and controlled self disappeared, and she seemed to alter in every way. She paid no attention whatever to the dishevelment of her hair, the position of her clothes, the position of herself. She turned on to her back after a time, and unfortunately had a considerable amount of discomfort from a large rosette of distended and sore piles. The bottom of her wound also gave her considerable pain, but she did not know where she was. Her eyes were half-closed; between the contractions she passed into a quiet, sleepy condition, not answering when spoken to, and when a contraction started, she suddenly brightened up, and said, "Here's another one," and grasped her knees, pulled her legs into the correct position and helped for all she was worth. After a time she gave vent to an exaggerated groan, because it was Nature's demand that she should not relax the tension too quickly. I also pointed out that there was no need for her to suffer pain at all, and I had already explained to her how to use the gas apparatus which was in her hand or on the pillow beside her, and she quite violently said, "It isn't a question of pain; it is this frightful bursting feeling; I feel I am going to burst down below." I assured her that she was not going to burst down below, and her reply was, "You don't know." She generally became an aggressive, different woman altogether, but still assured me that it was not a question of pain, but as each contraction faded away she became listless, semiconscious and sleepy.

The head came down nicely; the crown began to show; the membranes had ruptured previously. The second stage was only twenty-five minutes from beginning to end. When the head began to crown, I said, "Are you quite sure you are having no pain?" She looked wildly at me again, and grasped my arm, and said, "Pain? What do you call pain? The whole damn thing is painful; you ought to know it by now." I said, "Why have you not taken your gas, then? It's there, and I asked you to let me know if you felt anything that hurt you, and you haven't taken it. Now, will you please take your gas, because it is not necessary for you to have pain; in fact, I object to your having pain." And then, in quite a feckless way, she said, "Oh, it isn't really pain. Let's get the thing over; I'm sick of it. Can't you do something?" I said, "No, certainly not; there is nothing to do. If you will do as you are asked now quietly, sensibly and in a controlled manner

we shall have this baby in a very few more contractions." And she said, " All right ; get on with it." I said, " Won't you have some of that gas ? " " No, I don't want the gas."

The head came down and crowned, and there was a lot of scar tissue all round her vulva, and she said, " I think it is going to tear ; it feels as if it is going to tear." I said, " Does it hurt you ? " and she replied, " No, it doesn't hurt me, but it feels awfully tight." I said " Very well ; I think you had better have a few whiffs of gas." So she put the mask over her face, and took a few whiffs of gas, and then said, " It doesn't hurt ; what do I want that for." And so on. That was her sort of behaviour the whole way through. She was certainly not a woman who was conscious of what she was doing entirely, and certainly not the Mrs. X I had known for five or six years as a rather mild, gentle and refined woman in her manner. Here was the changed woman whose consciousness had been driven below the normal level, and whose powers of discretion and discrimination were dulled and whose sensory receptors were inhibited.

The baby was born naturally, and there was only a small tear—a little slit of less than half an inch long in the scar tissue, which was kept together with one small stitch, the immediate insertion of which appeared to cause her no discomfort.

When the baby arrived, it was quite an astonishing picture. Mrs. X came out of that amnesic state, and I said, " Here is your little girl." She looked at me, " That isn't true." I said, " It's quite true." Her eyes were half-closed and she continued to look at me in a suspicious way. The baby cried lustily, and I held it up and said, " Now you may shake your daughter's hand." She asked, " Are you sure it is normal ? " I told her, " There is nothing the matter with this baby." But she sighed, " Ah, you don't know."

So, after possibly three or four very trying minutes, she took the child and held it in her hands and inquired, " Is this what a healthy baby looks like when it is first born ? " I said, " Exactly." It was quite a nice specimen of a small, pink, full-time child, weighing 6 lb. 10 oz., and was perfectly normal. Then she seemed to cast her doubts and fears away ; it was really a very dramatic picture as she suddenly cried, " Then I'll believe you," and took her baby as if it were the one thing in the world she lived for. In a flash her restraint disappeared and she was wreathed in the smile of incomprehensible happiness.

Mrs. —— had her baby this afternoon. She had come to me late in pregnancy, and I found her rather difficult to educate. She was

not inclined to undertake any of the exercises or to accept any of the teaching that I offered her. She was a pleasant woman, but at the same time one who allowed you to talk while obviously not intending to carry out any of the suggestions made. Her small child was about two and half years old, very active-minded and healthy in every way. She was only 5 lb. 14 oz. when born, and Mrs. —— had had what she described as a very unpleasant time. She was stitched up after a forceps operation, and knew nothing about it except that she was chloroformed and felt very ill for some days afterwards.

I found her pelvic measurements excellent ; there seemed no reason why she should not have a 10-lb. baby with ease, and in this particular pregnancy everything was according to the book in every way. She was a very healthy, strong woman.

I had been awaiting the onset of her labour with some interest as to what would happen when she did start because of her obvious inability—or possibly pigheadedness—to make any use of the advice I had given her about exercises and diet and relaxation, or in fact anything at all, but as she was such a healthy woman I did not lay great stress upon these things, and let her go on in her own way until she came into labour.

At 8 a.m. she arrived at the maternity home, and I went in about 9 o'clock, having been told that she was having steady first-stage contractions. When I got there I found her extremely fussed ; she was becoming rigid, and screwing up her face, uttering moans of agony, flinging stiff arms up into the air as if to implore the help of the gods, and I asked her what it was all about. She quite readily told me that it was because it hurt, it was agony, it was awful. So I explained to her that the chances were really a hundred to one that she was making all this pain herself ; she had overlooked the teaching I had given her (I did not rub this in, of course), but I sat on her bed and explained to her exactly what was going on. I pointed out that during this stage of labour the uterus, or the womb, was simply opening the door in order to allow the baby to pass through, that there was nothing whatever she could do to help but that there was quite a lot she could do, and was doing, to hinder this process. I demonstrated to her how the lower part of the womb had to open before the uterus started, even, to push the baby into the world. If she tightened herself up, she would naturally tighten up the door, and it was like trying to push someone through a door which was being half-closed, or anyhow being made very tight for them to open. She seemed to understand this and tried to relax. The first contraction was just as bad ; I told her not to expect any result until she had tried several times ; I explained again how to

relax, I advised her to stop rolling her head backwards and forwards on the pillow, to drop her hands quietly to her side, to turn over on to her back, and if necessary even to pull her legs up a little bit and rest them on the bed. I then told her about deep breathing, to keep her eyes open, and certainly not to think in terms of pain and agony. After a very short time she became quiet, and admitted that there was no question but that things were quite different.

So I went away and returned in two hours. She was then sitting on the edge of her bed, obviously just beginning the second stage. I took her into the labour ward and examined her vaginally because I felt that in this case the sooner I knew exactly what was going on, the sooner I should be able to help her. Soon the head was quite down, and she was taking a whiff or two of gas with each contraction. I allowed her to come a little out of her gas, talked to her, told her exactly what to do, and she then said that it was not too bad, but she was in a terribly nervous state about the whole thing. So I explained again exactly what was going to happen : how the head was coming down, and that although the stretching feeling she was sure to feel would not result in any bursting—which I may say I said with a slight shudder when I remembered that she had had five or six stitches in her perineum before—if she did as I told her the baby would come quite easily.

She had a very good contraction, and the head came down and crowned at once ; she was rather fussed about this stretching, but I told her to open her eyes and look at me whilst I talked to her (I have found this of great importance). I asked her if it was hurting her, and she said, " Well, it is stretching so tightly." " The point is," I said, " Does it hurt, or do you feel it may hurt at any moment?" She replied that it did not really hurt, to be honest, but that she felt she was going to split open below—the same story that one hears so frequently. Anyhow, between the pains one managed to ease the very scarred perineum over the head successfully without rupturing the old scar, and then her baby's head was born, blue. I could not think why, until I saw the cord twined tightly round its neck, and to my astonishment I could not loosen the cord in any direction. It was definitely tightening, so I turned the baby sharply up over the pubis, which is a manipulation done frequently under those circumstances, and then found that the cord was also tightly bound round the left foot, and every time an effort was made to extract the baby, its left leg extended and tightened the cord round its own neck. I was able to unwrap the cord from round the baby's left foot, which was also quite blue and constricted, and then it was easily loosened at the neck, but it had made an indentation in the baby's neck, and the colour of the head above the cord was quite

different from the colour of the body below it. It was an interesting feature, and an unusual situation.

Everything went well. It was not a big baby—about 7½ lb.—and there was no bleeding. She went through my usual routine of taking her baby in her hands, and was very happy. The placenta was expelled by bearing down when she felt the uterus contracting ; that was just twenty minutes after the baby was born. On the whole, therefore, this was a very ordinary case ; she had a little more vomiting than usual—four or five times during her labour and afterwards. I think that it was possibly due to the fact that she was given a glass of glucose and water and she told me afterwards that she was not very good at sweet things.

Mrs. ——'s remarks after it was all over was, " Well, if that's all it means to have a baby, I can't think why women make so much fuss." I said, " But most women don't have their babies like that ; they have them more as your first one arrived." And she said, " If that's the case, I can understand why they make a fuss." That comment was from a woman who had not really tried to follow the teaching.

Possibly this does demonstrate that relaxation and instruction at the time of labour, even without previous education, are repaid a hundred times. I cannot help feeling myself that in every case instruction in relaxation, explanation of exactly what is going on and how it can be coped with, are of tremendous assistance ; a woman's mind is relieved and, as this good woman said to me, " You know, I wasn't told anything about it last time. It makes it so much easier when you are told what is going on, and you can at least try." I thought that was a very wise remark from a working-class woman who had not really shown very much interest in one's teaching.

Mrs. ——'s baby was born at 3.30 this morning. It was the day upon which we had expected her baby to arrive, and she started in the normal way—a sense of contraction and bearing down in the groin, which passed through to her back, coming on about every twenty minutes. So she went into the maternity home and was very calm about the whole thing. She made very light of it, in spite of the fact that her first baby arrived in anything but a normal manner. On that occasion she was very badly torn ; she described her labour to me as a very unfortunate affair, and she remembers very little about the last stages of it except that she had a good many stitches put in. The child only weighed 6½ lb.

During the first stage of her second labour everything went well.

She did her best to relax, but being a very highly strung woman, it was difficult to let her body go entirely. Her thoughts went back to her previous labour, and she was unable, therefore, to believe that it was possible to have first-stage contractions without a great deal of pain. But she persevered and remained cheerful the whole time. As the first stage came to its close and the cervix was dilating, she went into the labour ward and started to have pain over the sacral area. This was massaged in the usual way, but she persisted in tightening herself against it every time a pain came on. This area of sensitiveness was quite definite, and when pressed with the palm of the hand it was considerably relieved. She turned on to her back, and found that she was able to endure it. It was interesting to note that her pulse was only 70, and as soon as a contraction had passed off she was a very jocular, cheerful, amusing woman. When the contraction started again, she knit her brow and expected a lot of pain, and told me that it was quite impossible for her to believe that such violent contractions were not going to culminate in the most painful sensations. Those were not her words, because she is a woman who uses very vivid language. However, I explained that if she could put up with about a dozen or possibly less of those " back " pains, the worst would be over, and she would be able to push down and help. After five or six such contractions the pain suddenly diminished, and she assured me that she was reasonably comfortable. I asked her then to bear down gently, to see if she had any desire to do so. At first she had none, but after a few more pains she tried again, and said that it definitely made her feel as if she could do something to help.

So we went on during the second stage, which was rather long for a second baby. As the head came down, I warned her of the rupture of the membranes, which took place, and she was quite thrilled to know that it indicated considerable progress. She relaxed completely between each second-stage contraction, even to the point of going to sleep, but always woke up with a bump and " expected to burst," as she put it. She said a baby of this size could not be born without tearing her to pieces again ; I assured her there was no reason for that if she took the whole thing quietly, but she did become very apprehensive and nervous, and was not one of the best examples of confidence in the spoken word. However, I must say that she persevered in spite of herself, and did well. I was able to tell her some time before the baby was born that I could see its head and that therefore she was getting on satisfactorily. She was then lying on her back and pulling her knees well downwards and outwards, in that way getting the whole stress and strain of the contraction at the best mechanical advantage. As the head

crowned she became very frightened. She had at this time, of course, got the gas apparatus in her hand ; it was explained to her and she practised the use of it. With each of the last half-dozen contractions she took the gas violently, and appeared to feel much less discomfort. When the head was born, she did exactly as she was told, the influence of the gas apparently being very slight. There was no pain and she had lost the feeling that she was going to split. She was delighted when her 9 lb. 9 oz. baby arrived—an astonishing size and weight for such a comparatively small woman with an android pelvis. Unfortunately the shoulder tore her perineum just in the upper part of the scar, rather less than three-quarters of an inch.

Directly the child was born, Mrs. —— took it in her arms and was very happy indeed ; too happy for thought because after the mental and nervous strain of her fear she first of all laughed and then, as these highly strung women do, burst into tears and was very effusive in her tearful joy. I immediately put a stitch in her perineum which she told me did not hurt at all, and after about a quarter of an hour the placenta was pushed out with slight pressure on the surface of the abdomen. This, she said, hurt her more than anything else during labour because her tummy was so sore.

In nine days she was home doing her housework, and in twelve days she had absolutely recovered, and was very happy, saying that it was a simple thing for a woman to have a baby.

Mrs. —— had her baby at 10 o'clock on the night of October 29th, 1940. I had expected her to do it well ; it was her third child, and although for neither of the previous children had she any knowledge of what had happened, she was quite prepared to believe that the baby ought to be born much more simply. She had accepted a certain amount of the teaching of natural childbirth, but not very much. She was not adept at relaxation, and disliked exercises of any sort. As she put it, " I never walk a yard if I can help it for any purpose whatever." Consequently she put on a good deal of fat, and was not in what I call the best of condition when she came into labour. The baby came one day early ; it was due on October 30th. She went straight into the maternity home, and I arrived about ten minutes after she did.

When I went in to see her, she was having very good first-stage contractions, but like so many others was proceeding to make a tremendous fuss about it ; she adopted all the usual practices of screwing up the face, clenching the fists, saying it was too frightful for words, lying on her side with a look of hatred for the whole proceeding, and so on. I talked to her for some time, and impressed

upon her the necessity for relaxation at this point, and I was rather interested to hear her say, after having tried to relax after the very next contraction, " By Jove, that makes a difference, doesn't it ? " And so we went on. I stayed with her all the time ; she seemed to like to have me about, and she became adept at the relaxation after she had found for herself the benefit of it. After she had had an enema, she was moved into the labour ward.

About three and a half hours after she had started—I had been out for a quarter of an hour to have a smoke—I went back to find her definitely changed. She was irritable, and had lost all desire to do anything for herself. She quite agreed that it was all very fine to go on like that, but what she wanted now was to " get out of it." She didn't mind what I gave her ; she would have an injection, she would take medicine, she would have an anæsthetic, or she wouldn't mind if she just went to sleep until it was all over. She was heartily sick of the whole business. I recognised in that the recurrent fear she had experienced in her last labours, and told her that this was not the time to lose courage, but that if she was getting any definite pain, to let me know. She said that the whole of her body ached from top to toe, which was, of course, the best possible way of telling me that she was having no localised acute pain anywhere. I examined her and found everything in good order, except that there was too much urine in her bladder for comfort at that stage. Having emptied her bladder, she definitely got a move on, was obviously in the second stage, and actually went to sleep between the contractions. I explained to her how to hold her breath, but it was a most extraordinary thing, she could not hold her breath, and not only that, she would not hold her breath. After a time, however, she managed this with fairly strong persuasion, and found that the bearing down added tremendously to her own personal sense of being useful. She promptly lost all that desire to escape. I told her that everything was going very well and that she would have her baby in a very short time, and she had no further wish for escape of any sort. I handed her the anæsthetic apparatus and told her to take it when she liked ; I advised her to take it only when it hurt, and not simply so that she could escape what she could do with courage, and do well. She accepted all that, and got on with her job very nicely indeed. Being the third baby and a large pelvis, it came down quite easily and in a good position. Then the head showed, and she began to get panicky again. I pointed out that there was nothing in the world to get upset about ; she had done all the work that was required ; she need do no more if she did not wish to, the uterus would do it all for her. I told her that she had certainly had all the discomfort she need have ; then she

made another thoroughly good effort, and the head crowned. It did not go back ; I was rather surprised, in a way, that it crowned at all, as it looked as if it was coming straight through the vulva, but it did not. At the next contraction, I told her not to hold her breath and to relax until she was absolutely flabby ; she had a good contraction and a relatively large head appeared, and at the end of the contraction the eyebrows were just level. So we put a little pressure on to the fundus and produced the head slowly. I noticed that she was not taking gas at this time, and I told her to take it if there was any pain at all, or any discomfort. She was lying half on her side and half on her back, and was very interested in looking down, and said, " No, indeed. I certainly do not want anything now ; I want to see this." So the head was born. I told her what a fine head this baby had got, and that I would press on her tummy if she would take a deep breath with the next contraction and give a gentle push. That loosened out a fairly big pair of shoulders and, according to plan, she breathed quietly whilst I produced her baby in a perfectly straightforward way, and she was thrilled. It was a boy, which she wanted as the other two were girls, and she said it was wonderful. Fortunately the boy stretched out his arms to her as I held him up, yelled vociferously and opened his eyes, and looked the picture of a perfect baby. She had never before seen a baby so young. She had not seen either of her previous children until twelve and fifteen hours respectively after they were born. She was very happy and thrilled about the whole experience. She appeared to be shy at looking at a baby so small, and very gingerly took it by the fingers and said, " What an extraordinary looking little object it is really, isn't it ? Are they always born that colour ? " And asked various questions about it, entirely forgetting herself in the meantime. I need hardly say that with such a labour there was no tear or even minor laceration of the perineum.

It was a perfect labour, and she told me that she had not had any pain at all whilst the baby was actually being born, and seemed rather disappointed that she could not tell me she had had pain. She was a cheerful disbeliever in many ways. The after-birth arrived within twenty minutes by her own effort, and there was practically no hæmorrhage. She told me then that she saw no reason why she should not get up and go home with her baby, and I replied that I knew no reason why she shouldn't, except that unfortunately it could not be done !

So the labour ended. Her husband was amazed after his previous experiences, and it really was a very nice picture of a baby weighing 8 lb. 10 oz., and a mother perfectly well having seen natural childbirth for the first time.

Mrs. ——'s baby was born at 2.10 p.m. on September 10th, 1940. Four months ago this lady, who is the wife of a doctor, came to see me. She told me that her first child was born under difficult circumstances ; she had instrumentation, and although there was no tear and the baby was very small, she said that the whole thing had been the most agonising affair she had ever experienced in her life. She said she loathed the idea of having another baby ; she was extremely frightened, so frightened, in fact, that she lay awake at night thinking far more about the arrival of this second baby than of the bombs which dropped in the vicinity of her house from time to time.

I found that on the whole she was very ignorant of what went on when a baby was being born, or during pregnancy. This is not, of course, unusual amongst doctors' wives. So I concentrated upon educating her in the facts of pregnancy during those last three months or so. She was a willing and able student. She practised relaxation assiduously and really became very good, but disclaimed all merit and persisted in telling me that she was hopeless at it. She adopted my particular form of diet– that is, reducing meat and drinking milk ; in fact she did everything that I asked her to do with the result that when her baby was due to arrive, I felt happy and satisfied that she should have a perfectly straightforward and easy labour. It did not appear to be a large baby although she is a well-made woman, and I was surprised and rather puzzled at the difficulty she was alleged to have had over the first baby which was only $6\frac{1}{2}$ lb. when it was born.

Her husband came home on leave about September 8th, and we decided that as he was to be at home, she should go into the maternity home and have what we call a " cocktail." I pointed out to the husband that if nothing happened, the baby was not ready to come ; if it was ready, he would have the pleasure of being at home while the child was being born. She had the oxytocic, but nothing whatever happened. He was a little anxious that we should try again, so after forty-eight hours it was repeated, and again nothing happened, so I sent her home to wait the time.

It so happened that nothing occurred for a fortnight. Then I was called away into the country for a week, and very reluctantly had to leave her in the charge of another man. When I got back she was twenty-one days past the date, most carefully reckoned, upon which the baby should have been born. I spoke to her on the telephone, and she told me she was extremely well ; she said she did not feel in any way like having a baby and was not at all worried, but at the same time was delighted that I had come back

as she had decided when I told her I had to go away that she would not come into labour until I got back.

Approximately twenty-four hours after my return, at about 12.30 in the afternoon, she rang to say that she felt the first contractions, tightening of the uterus, and so on; they were nothing that she could call bad, and she was just getting the dinner ready for her small child, and if I thought it advisable could I go round and see her to let her know what the situation was.

I arrived at her house at about 12.45, and somehow or other when I saw her I knew that not only was she in labour but that she was getting on very nicely. I examined her on her bed and found she was relaxing most beautifully, and she said how interesting it was that when she lay down on the bed and relaxed she felt so much less of it that she did not think she could be doing anything; in fact, she hoped very much it would not all go off altogether. My reply to that was that she should allow her mother to finish preparing the dinner, and that she should get into my car and go straight off to the maternity home without wasting any time. I had, of course, noticed that the head was right down in the pelvis, and there appeared to be so much room that it was the sort of second baby that might arrive without any effort. When she got into the home, there was very little doing, so I went to have some lunch—a very unwise thing to do. I was just about to start eating it, when sister sent a message to say that Mrs. —— was fully dilated. In a few minutes I was back in the labour ward, where I found sister receiving a very large head. Mrs. —— was lying on her back in the approved fashion, being extremely good, but the last two contractions had frightened her because she said she felt enormous stretching, and although it was not so much physical pain, it was a terrifying experience to feel the whole of the lower end of your body stretching to the extent to which hers was. However, sister delivered the baby most beautifully. I talked to Mrs. —— explaining exactly what was going on, and she refused to believe that the baby was born, and just then it gave a lusty cry, and I said, " You cannot fail to believe, that, can you ? " And her reply was, as usual, " How marvellous ! " I lifted the baby up to show her and it really was a pretty baby; some of them are, even when they are only just born, and it was not overdue in any way, but was a perfectly natural, full-time baby, although it was twenty-three days over the date upon which we had expected it.

The whole thing was quite incredible to her; she refused to believe the baby had arrived until she saw and heard it, and then, of course, everything was wonderful. She laughed and said she felt perfectly well, but she was still terrified because she had always

heard that the after-birth was even more painful than the arrival of the baby. So I asked her if she had really had very much pain with the arrival of this baby, and she said, " Well, I don't know what else to call it ; it was the most alarming feeling." That, I think, is a justifiable remark ; it was an alarming feeling to a girl who certainly did not want any anæsthetic, and did not take any. She cried out for chloroform before the after-birth was expelled, and sister told her the gas was there if she wanted it. Mrs. —— immediately opened her eyes and smiled and said, " No, of course, it is not necessary, but what is going to happen ? " This demonstrated once again, I think, the demand to escape from fear, much more than the necessity of escaping from pain. The placenta was born twenty-five minutes after the baby by her own effort ; there was no tear of her perineum.

When she knew her labour had lasted only one hour and twenty minutes, she seemed unable to realise that a baby could be born so easily. She told me afterwards that she was still conscious of the presence of fear ; although the birth was over and everything was perfect, she was quite unable to throw off the extraordinary sense of apprehension, even after the event, which demonstrated how deeply these impressions can become embedded in the mind.

Mrs. —— had her baby yesterday afternoon. She had not been a satisfactory patient and throughout her pregnancy there had been a great tendency to know everything ; whatever was suggested to her, she knew all about it at once. If I asked her at any time whether she had carried out this or that, the reply always was, " Oh, yes ; perfectly, of course. Everything you said." Yet she gave me the impression that she had carried out nothing. She certainly had not practised her relaxation ; I think there was very little doubt that she had never adhered in any way to the diet I had given her. She knew everything ; there was nothing to teach her.

Her first baby had been a breech, and it appears that she had had rather a bad time with it. The breech was not discovered until during her labour ; she had not, apparently, been examined very frequently. She was torn at labour and a good many stitches were necessary inside and out. This made her at heart a disbeliever, and rather than go to the trouble of arguing, or rather than try, she preferred to give the impression that she knew everything, that there was nothing whatever to tell her, and therefore that everything was going to be perfectly wonderful.

Eventually she came into labour, and it was unfortunate that her husband, having been at home on leave for a few days, had to go

back in the middle of her labour. She started early in the morning with the ordinary straightforward pains which gave her no discomfort at all ; she tried to relax, but obviously was not doing it well ; yet she insisted that her relaxation was perfect. The labour went on in a satisfactory way ; she had an enema and the membranes remained intact, but she had a certain amount of irritation of the bladder and passed water every hour, which was trying for her. Just after lunch I went to see her ; the head was already well down into the pelvis in the right occipito anterior position, and she was behaving reasonably well because, as sister said, she really had had no discomfort at all and she had not realised that she was getting anything like so far on in labour.

When I went in to the labour ward to watch her contractions after I arrived, I made a mistake in that I said, " This is splendid ; you are getting on much better than you realise ; in fact, if you will use one or two contractions properly I think we shall be able to see your baby, and soon it will be born." That was altogether too much for her. She looked round at me like a frightened anything-you-like, and said, " Oh ! I'm not really so far on as that, am I ? " and immediately lost her head, and exclaimed, " What am I going to do ? What am I going to do ? Can't you help me ? Can't you do something ? Oh ! get me out of this agony," and became quite hysterical. So I spoke firmly to her and asked her whether she was having any pain ? She replied, " Pain ? I don't know what it means. The whole thing is awful, it's dreadful," and she started yelling at the top of her voice. I had to be strict with her, and told her that there were times when we did not expect a woman to play the fool ; this was a serious thing ; she was to do as she was told and would meet with very little difficulty. One is not often so firm with a woman, but when one is dealing with a person who is entirely feckless, it is necessary to pull them up pretty sharply and make them pay attention to what is said. After I had done this she had one or two good contractions, refused to push down with them, and yelled at the top of her voice.

I asked her between the contractions where she was having pain, and she replied that she was not having any pain ; she was not feeling anything. So I inquired what in the world was the matter, and she said it was all so dreadful, did I not think so ? Quite frankly, that made me just a little bit tired, so I said, " There is your anæsthetic apparatus ; we use it for pain ; we do not use it for plain funk, especially when there is no reason to be afraid." That did make her feel a little ashamed, and she took a few whiffs of gas and pushed down much more satisfactorily. Then, however, she started lapping up the gas between contractions, so I had to tell her there

was no need for that and that she was to take the gas only if she had pain. She said she would try. It was rather interesting, because she then tried without it and found it quite easy ; she assured me there was no discomfort at all, but asked me whether it was possible for this baby to come out without an awful lot of agony ? I asked her what awful agony, and she said she did not know, but that last time she had to have chloroform because there was such awful agony. I told her that if she had had chloroform she could not have known much about it, with which she agreed, and after that she got on with the job, and with five good contractions the baby was produced, and was born quite perfectly. She was terrified the whole time. I asked her again and again if it was hurting her at all, and she repeated that she had no pain, but that the whole thing was so *awful.* When her baby was born, and cried, she immediately became a different woman. She said, " That's wonderful. I can't believe my baby is born ; are you sure it is born ? I want to see it." So I lifted the baby up to show her, and she assured me then that she had had no pain at all ; all her fears were gone and she was very much ashamed of herself, and said that she would not have believed it possible that she could have become so foolishly hysterical, and apologised for her behaviour. I told her there was nothing in that whatever, that many ladies of her temperament had that sort of outlook on labour. The baby was separated, and she held it in her arms for a time, and was very happy, and presented quite a delightful picture.

It was a perfectly normal, natural labour ; there was nothing whatever that could have given her the slightest discomfort except the thoughts that were passing through her mind. She was most grateful for all that was done, and could not believe that there was not a single scratch or that no stitches were necessary. As a matter of fact, it was rather lucky that all the old stitches held ; it was not a very big baby and when the child was born she was behaving herself quite nicely. That enabled me to get the baby through without any violent strain on the perineum.

Perhaps Mrs. —— did serve her purpose, inasmuch as she demonstrated how many labours are ruined by the wild fear that creeps into a woman's mind, creating the anticipation of pain and giving the appearance of torture, when in reality it is the mental attitude of the woman towards the function which is doing the damage.

Mrs. —— came into labour at about 7.30 in the morning, and rang me up to say that the pains had started. The way that she put

it to me was that the contractions she felt were down in the groin ; they came regularly about every twenty minutes. They were not uncomfortable in any way, but she thought they were sufficiently definite to ring me up and ask whether I considered she was in labour. I told her I thought there was no doubt about it, and because of their regularity and the situation of the contractions which she felt, I suggested she should go into the maternity home.

I did not expect her to be a very good case, because she was a woman who came to me at twenty-eight weeks and had already developed an extremely painful back. Examination of the back showed that she had a very tender place just under the left twelfth rib, and another very tender spot over the left sacro-iliac synchondrosis. I manipulated her as gently as I could and she said it was better, but during the last week of her pregnancy her back got very much worse ; she was unable to stoop and suffered considerable pain. From previous experience, I thought that this would be a labour complicated by a painful back.

Up to about 2.30 in the afternoon, she took her first-stage contractions completely relaxed and extremely well. At about 7.30 in the evening there was some suggestion that she might be getting towards the second stage. So Sister rang me up, and I went along, and found her in very good form, doing her duty towards her contractions as she should ; I did not think she was getting very near the end of her first stage. There was no need to examine her ; the head was well down, and there was no suggestion of any complication ; she was not tired, there were no signs of exhaustion or any fear whatever.

At about 11.30, they rang me up to say that she was now obviously in the second stage. I found her a little fussed at this time ; she could not quite get hold of the idea of relaxing entirely between the contractions and using them when they came. This was, of course, exactly the opposite of the procedure she had undertaken in the first stage. However, we got on well ; the head came down nicely, but she had a tremendous amount of pain in the back ; she said that every time a contraction came on it felt as though her back was going to split across. She had no pain whatever in the front, and although I offered her the anæsthetic relatively early, she did not wish to take it until the head was quite in the pelvis. When she did take it, she found that it relieved the pain in the back, but when the head crowned she put away the mask and said that the pain had gone. That was interesting to me, because it seemed to suggest that directly the pressure was taken off the pelvic girdle, there was no further pain in her labour. She persevered ; she used her contractions and relaxed well in between them ; she kept up her strength,

and when the baby was at the very last stage of crowning, I asked whether she was sure she had no pain ? She told me that so far as the baby was concerned, there was no pain at all, " It's only this blessed back of mine."

So the baby was born with Mrs. —— watching. She took the baby in her arms within ten seconds of it having cried ; the cord was separated, and she presented the same delightful picture of motherhood that we are accustomed to describing. I suppose that she had altogether about twelve whiffs of gas as the head was coming down through the pelvic canal. Unfortunately she had a small tear which necessitated two stitches, which she said were more painful than the rest of her labour, except for her back.

It was another example of a normal, natural labour complicated in a woman who had not been taught early in pregnancy to get loosened out by exercises to keep herself muscularly lissom. She had not taken any exercise before the pregnancy for some years. She was thirty years of age, and was the sort of woman who lived a suburban life without any interests outside her own front door step. However, once the baby was born, she did very well. The placenta came away with very considerable hæmorrhage ; why, I do not know, but I think she probably lost between 30 and 35 oz. altogether. It was an easy and successful labour with the exception of this frequent complication of pain caused by the condition of her back and not by the mechanism of normal labour. I have no doubt that with proper manipulation and treatment after labour the chances are very much in favour of her losing all that pain and never being troubled by it again.

Later Note. During the puerperium I manipulated her twelfth dorsal region and sacro-iliac synchondrosis. She was cured in four treatments.

Mrs. —— had her baby daughter this morning. She was one week overdue, which was unfortunate, as she had been an extremely apprehensive patient during the whole of her pregnancy. From the very beginning she was persuaded that labour must be an agonising affair. She refused to believe that it was possible for a woman to have a baby and be conscious. Her friends—who were chiefly ladies of the West End of London—had all spoken to her of their labours and of the awful times they had had. One of her best friends, who had just had an extremely difficult labour, had not been prepared in any way ; she asked me to look after her two days before the baby was due, owing to a difference of opinion with the physician she had previously chosen. I undertook her, therefore,

quite untrained, and the position was not in any way satisfactory. The baby was already rather large ; she had not prepared herself for pregnancy in the way that one advises, and therefore—as was to be expected—she had a very trying labour. The baby's head remained in an occipito posterior position, and after many hours of hard work we had to give her an anæsthetic to get the baby's head into the correct position and help it to be born with forceps. There was a certain amount of tearing of the perineum, and although the end result was excellent, she had not, being Mrs. ——'s best friend, given her the best sort of encouragement in childbirth.

Mrs. —— started her contractions at 1.30 in the morning ; there was a slight show, and at 2 o'clock the contractions were about one in every five minutes. She behaved in an extremely good way—that is to say, she tried her very best to relax, in spite of her apprehension, and she was successful. She said there was very little discomfort in these contractions. At about 4 a.m. the head was getting down nicely, but there was still a lot of work to be done, and she lost control for a short time, therefore a $\frac{1}{4}$ grain of morphia was injected so that she could get some sleep. I should not have advised this under ordinary circumstances, but I knew in this case that no persuasion of mine would calm her down sufficiently without analgesic assistance—a justifiable use for analgesics, in my opinion.

By 6 a.m. the contractions were quite strong, and although she was only half-awake she was getting on very well, and still relaxing, so that the progress made was quite rapid. At 7 o'clock the contractions were one every three minutes and the head, which had been high during labour, was now well down in the pelvis, and she was still conducting herself as one would wish. At 7.45 the membranes ruptured, and in spite of having been warned about this, she was terrified ; it was one of the things she had not believed could occur in the normal course of events. However, she calmed down, and the second stage proceeded quite satisfactorily. At 8.10 the head was on the perineum ; it remained there for some time because she had a tremendous fear of what was about to happen. She said she did not believe it possible for the head to get through. Although she was a big woman with a very fine pelvis, she was definitely persuaded that she must burst, and it was with the greatest difficulty that one was able to assure her that this would not occur. She had passed through what I call the " pain period " of labour very well indeed, and she told me that there was really nothing she was not prepared to put up with, but she was so terrified, could I not do something to relieve her agony of fear, as

she put it. So I talked to her quietly, and explained exactly what was going on, and it really was gratifying to see how an intelligent woman with confidence battled against her own fears.

The perineum started to dilate, and the head crowned. She had, of course, had the gas apparatus in her hand all the time, and although she had from time to time taken a whiff of gas—which she said helped her a lot—she now gave it up entirely, said there was no pain and she wanted to see what was going on. At about 8.30 the baby was born quite perfectly. The head had fully crowned, and I turned the occiput up over the pubis and the head was born swiftly. She was most thrilled and interested, and then with slight pressure on the abdomen between the contractions, I produced the baby's body. There was no tear, no hæmorrhage, and my patient had put away the gas apparatus, and when I held up her baby to her (which she had assured me many times she did not want) tears came into her eyes, and she said, " What a funny little thing. Do all babies look like that ? Are you sure it is all right," and so on. There was a very good reason for her tears which need not be recorded, but she was terrified lest certain things should be shown on her baby. She took the child in her hands as soon as I had separated it from her, and was the usual picture of delighted happiness. She wanted a girl ; she wanted exactly what she had got ; she handed it back to me, and after a few moments said, " I only wish I felt sure I could be a good mother." So spoke a woman with everything that Nature could possibly provide, who had overcome her fears in the most courageous way ; who had been first of all terrified of pregnancy, then terrified of labour, and finally terrified of motherhood. I thought it a great opportunity for a hopeful obstetrician and physician to make a very good woman out of one who had been labouring under the influences of unjustifiable fear.

At 10 p.m. yesterday, Mrs. —— rung up the maternity home. She had felt during the day that the contractions of her uterus had rather tightened up ; there was a certain definite rhythmic nature to them. I had explained to her that this was important in diagnosing the onset of labour.

It was her second baby, and she had not by any means enjoyed her first labour, and although she showed every confidence in her instruction and tried very hard to recognise that labour should not be painful or " disastrous," as she put it, she was still a little apprehensive about what would happen.

She arrived at the maternity home at 12.30 a.m., and I went along to see her (chiefly, I think, because of the case the previous day at which I had arrived too late). I examined her P.R. and

found that the os was only one shilling dilated, and that it was the same size as it had been on my examination P.V. the previous day. The contractions were very weak, and there really was not very much going on, so I decided that she had better have a sleep, as she had not been sleeping very well, and that her labour would come along in the normal way during the night. So we all retired.

At 6.30 she awoke, and labour appeared to be progressing well ; she had not slept the whole time, but off and on, and when I arrived at 7 o'clock I found the head well down. There seemed to be no discomfort ; the patient was relaxing very well, and I told her that she might possibly be able to help now by pushing with the contractions. That resulted in the most dramatic picture, because when she pushed, the head came straight down on to the perineum, and was almost born with the first effort that she made. So I rapidly got into my sterile garments, and with the next contraction the baby was born quite perfectly and very easily. She said there had been no discomfort ; she could not understand that her baby had arrived. I lifted it up to show her ; she was a little disappointed it was a boy, as she had wanted a girl this time. She asked me how many stitches I should have to put in, and I told her there was no question of stitches at all because the perineum had remained intact. She then told me there had been three stitches last time, and she could not understand why there need be none this time. However, the birth was a delight ; the mother was pleased, and amazed at the ease with which her child had arrived.

So far, so good. The after-birth, however, was interesting. There had been no hæmorrhage at all, and I thought from the nature of her labour that the placenta had probably almost followed the baby into the vagina, as it does on some occasions. But when I came to look at her abdomen—she was a thin woman—there were two large swellings, which I hoped were the placenta in the vagina and the uterus sitting on top of it. But it was not so. There was a good deal of placenta down, but its upper part was obviously still in the uterus. So we decided to wait and let it separate in the ordinary way. We waited for about an hour, and nothing happened. She lost about 6 oz. of blood only, and in the meantime told me that when her first baby came, half the after-birth was left in the uterus because it would not come away. The doctor told her they had taken hold of the piece just inside and twisted it, but they twisted half off, and left the rest. She had a high temperature on the seventh day so they gave her an anæsthetic and operated " to put things straight," as they told her. I took that to mean that they removed the retained half of the placenta after seven days. I was interested in that because of the rather unusual shape of her

abdomen due to the uterus tightly contracted round the upper half of the placenta.

Nothing seemed to be happening after about an hour and a quarter, so it was decided to give her 6 or 8 oz. of hot saline P.R., and the placenta was passed naturally within a few minutes. On examining the placenta, there was a definite squeezed bulbous piece rather larger than a cricket ball at the top end, the surface of which was rough, and there was a good deal of hæmorrhage in the surface and a good deal of breaking down of placental tissue.

During the whole of the last three months of her pregnancy, Mrs. —— had had a very tender spot on the uterus, over in the right side of the fundus. I cannot say whether that had anything to do with this condition, but I am quite sure that the surface of the placenta, for an area of about two square inches, was quite different from the rest of the placenta, which was quite normal. She had practically no hæmorrhage—in all about 9 oz.—and the labour finished satisfactorily.

One other interesting thing about this labour was that it was the first time that I had examined my patient P.R. with her facing me ; that is to say, so that the convexity of my finger fitted in with the convexity of the sacrum. It was a very good method ; there was no discomfort ; one could feel much more, and I shall in future adopt that procedure rather than have the patient with her back to me.

Note. This patient went home on the twelfth day, and on the eighteenth day called at my clinic with her two children. The baby—already ½ lb. over birth weight—was looking very well. Mrs. —— proceeded to tell me vehemently that " She had never known any pain like the pain she had suffered at the birth of this baby." I asked her why she had not told me this before ; I reminded her that she had had the analgesic apparatus in her hand, and that we had agreed she was to use it if she had any pain. Her reply was that nothing on earth would have persuaded her to take " that stuff." I could see that this was not a simple dishonesty ; her labour had become agony to her after the event. " Who explained to you how painful it was ? " I asked her quietly. She then told me that her mother had told her it must have been agony ; all her own had been. Her friends had told her she must have suffered ; all women do ! And so she had, just as badly as at the arrival of her first baby. But she added, " Women don't make a fuss." I agreed that they did not, but I suggested that her acting had been supreme. She had not only expressed incredulity when she heard her baby cry and until I showed it her would not believe it was born, but had denied the need of gas as she was having no

pain. She had forgotten her remark to me at the time, " If that is how babies arrive, there is nothing in it." She had controlled her pulse rate to a beat of 75 to the minute in spite of her suffering. In fact, within three weeks she had built around her own perfect labour the picture of agony that all her friends and relations were suggesting to her. She needed sympathy and found it in pain. She angled for the heroism to which she might modestly allude, and found it in pain. The true story of her labour as we saw it would have lost her caste among her own people—so she preached agony !

At 12.20 a m. Mrs. —— rang me up to tell me that she thought the contractions of her abdomen were becoming a little more suggestive of labour than they had been during the week. This lady had already had one baby under my care and it had been the most perfect example of a natural birth, and I knew that her observations were likely to be accurate. I told her she must go straight into the maternity home—she had about six miles to go—and that she must not delay. The baby was lying in the left occipito anterior position and there was plenty of room, although it was quite a nice sized baby.

She got into the maternity home by 1 a.m. They rang me up from there at 1.10 to say she had arrived, but that there was no uterus contractions. I took the precaution of asking the sister whether she was quite sure of this ? Had she actually watched the uterus, and asked Mrs. —— whether she considered she was having labour contractions or not ? I was told that all this had been discussed, and that although the patient considered she was having labour contractions, she did not think there was very much going on. Would she like me to come to her at once or wait until later ? She didn't wish me to turn out yet ! This continued until 2.30, when the contractions were one every three minutes. Sister thought this rather odd, because they were very firm, but Mrs. —— was talking and smiling the whole time, perfectly happy, and suddenly volunteered the remark that she thought she was " getting on." So she was taken into the labour ward. At 2.40 the membranes ruptured and there was an immediate rush to the telephone to let me know. I was prepared for this, and I must say I hastened to the home, which I reached in less than fifteen minutes.

However, at 2.47 a baby was born to my patient whilst she looked on, coolly interested in the proceedings and delighted that she had got a baby girl. Seven minutes later (I regret to say) the physician arrived, and was greeted with, " Well, I have defeated you this time." But that was not until the poor Sister had met me

outside the labour room almost weeping because she felt she had let me down badly. She said she had been completely deceived by Mrs. ——'s state, and that although she had made every possible observation, except for examining her vaginally (which I never advise) there was not the slightest indication that her labour was progressing as fast as was actually the case.

I comforted Sister, and told her that that was how a labour should be and explained that this patient had been quite an artist at producing her first baby, and therefore how much more did we expect of her in her second labour. She herself thought it a great joke that after all the conversations we had had during her pregnancy, I should not be there at the birth of her child, particularly as I had had at least ten minutes' notice of its arrival !

Five or ten minutes after I arrived, she told me her uterus was contracting again ; she pushed down, and the placenta literally jumped away. It was quite free from hæmorrhage.

So we had another case without anæsthetics, without a tear, without hæmorrhage, and the whole thing was a great joy to her. She looked on this labour as being the greatest fun ; it was hardly serious, it was so jocularly treated. She came to the conclusion that it was hardly possible, because just about a week or ten days before the birth, she had begun to wonder whether she would have such an easy time with the second as she had had with the first, but now it seemed to her that her baby had arrived before there was anything to think about. The question of labour had completely disappeared from her mind because—as she put it—" There was no labour ; my baby simply arrived."

The important features of this labour really were that she was an intelligent woman who was well informed and knew exactly what was going on. Her relaxation was complete ; she did not expect any pain with the contractions ; she knew that her child must come in a straightforward way ; the question of anæsthetic did not arise at all. I have not much doubt that when she said she thought things were really " getting on," it was the pain period of labour.

The arrival of her child was the most exquisite moment for her ; she showed every delight and carried out the whole process in the most natural manner possible. It was a labour I was indeed sorry to miss myself, but it was also a labour I would have wished ten thousand women to have witnessed from every point of view.

Mrs. —— had her baby this afternoon at 3.20. It was her third child. She came to me rather late in pregnancy telling me that she had had considerable trouble with her children before, and found it very difficult to believe in the teaching of natural childbirth

although, having heard of it, she wished to try. I found her a very intelligent person, who was obviously more than willing to try everything she was asked to do. There was, unfortunately, one great drawback—she was a doctor's wife. However, she practised her relaxation assiduously, adopted the form of diet that was prescribed, and did her exercises as well as she could, but she was stiff and rather tender in the back ; she had not got what one would call a good obstetric back.

She started her labour by rupturing her membranes, and nothing happened after that for some twelve hours. Then slight niggling pains, as she described them, occurred, and at about 10.30 she started her first stage contractions. Sister —— was in charge of the case, and I consider her to be a very skilled practitioner of natural methods.

I went to see Mrs. —— at 12 o'clock ; unfortunately I did not realise that she had started ; the message I got was rather garbled, and I understood that nothing had really begun. When I arrived, she was having good first-stage contractions, and was quite comfortable ; she told me the relaxation was a miracle to her as she felt none of the pain she had felt with her last two babies. She was beginning to get a little bit distressed in mind ; she felt the whole thing was going to get very much worse, although it did not, so I sat with her for some time and we practised a little more definite relaxation. I went through with her a few of the elementary principles of labour, examined her P.R., and found that the head, although very high at the commencement of labour, was sitting down in the pelvis, and all was well.

I asked her whether she would like me to sit in the room next to hers or whether I should be with her, and she was very emphatic about my not leaving her. She preferred absolute quiet and peace, and I must say that Sister —— assisted me in that ; there was not a sound of any sort—even walking was on tiptoe, and my patient relaxed beautifully during the contractions and slept in between them. She asked me whether I minded if she held my hand, and I said certainly I did not. She lay on her left side ; I sat on the left of the bed ; her contractions became longer, and she did the whole thing very well. Then I noticed suddenly that there was a drooping of the eyes and a slight listlessness ; she was obviously passing into the second stage, but not before proclaiming that her back was extremely sore ; there was an aching pain low down in the sacral region. This was relieved by pressure and rubbing, and we went quietly and patiently on. I told her that all that was required was patience and hard work, and that if she felt any pain I would certainly do something at once to relieve it.

And so, from the beginning of the second stage, she became a typically amnesic woman. She found it rather difficult to hold her breath and to (as I describe it) "lean on it," and also at first she quite definitely screwed up her pelvic floor whenever a contraction started. Sister —— watched one or two contractions from below—as I naturally could not see—and told me that there was definite contraction of the whole pelvic floor, the anus being quite drawn in when the uterine push was at its height. We overcame that with a little instruction, and got on well. The pain in the back became rather more acute; Mrs. —— could not get comfortable or get into a good position. As soon as she raised her knees she got cramp, and so I decided that, since the head was obviously coming down well and there was slight distention of the anus already, she should turn on to her back and adopt the position which one frequently asks patients to adopt at that time. As she did so, the very first contraction seemed to present a different picture; the head came down until it was visible, the pain in the back was much less acute, and after about four or five contractions at long intervals —ten minutes or so—the head was born perfectly.

Now, unfortunately that baby's right arm was round behind its back, and it did stick a lot at the shoulders. I had instructed Mrs. —— in the use of the gas apparatus and for the last four or five contractions she had taken gas, not so much because it hurt, as she told me, but because she felt as if it must hurt. Her mind appeared to work along the lines of nearly all women who are treated this way. When the head was born she assured me at once that there was no more pain, and put the gas apparatus away, and then looked down to see the head as it was, and was immediately quite astonished and thrilled. The shoulders were not easy because I had to get the hand round from behind the back, with the shoulders being pushed up tightly underneath the pubis. However, with rotation we managed to get the baby comfortably with the next contraction.

The baby was born nicely—it was over 8 lb., and she saw the child born; she saw its stretched arms, and when it suddenly gave vent to the most excruciating shriek, Mrs. —— was delighted. She presented a very typical example of that amazing thrill that a girl gets when she sees and hears her baby cry for the first time. She immediately considered her baby to be perfectly sweet, quite the most lovely of all her children, and demonstrated those enthusiasms and delights which are such a joy to see.

The cord was thick, and following my custom of waiting until pulsation had practically ceased, it was four or five minutes before the cord was ready to sever. I did this very much to my patient's

interest, and then wrapped the baby in its warm towel and handed it to her. She held it in her arms and played with its fingers and tickled its cheeks, and crooned and murmured over her child in the most delightfully maternal and possessive manner. She was quite oblivious to our presence, but had that radiating smile of happiness which proved once again to me that there was no physiological treatment in the world for the uterus and the after-birth like the handling of the child by the mother immediately after it was born.

The placenta practically leapt out of the uterus into the vagina, and the uterus, hard and small, was two or three inches above the umbilicus within ten minutes of the baby's arrival. The vagina, however, had been sewn up inside with the last birth—a considerable amount of surgery had gone on below, and laceration of the perineum which had been mended. There was not a drop of bleeding, and at the end of half an hour we gently expelled the placenta, mainly by her own force. It was interesting to hear that she had always believed the after-birth to be a great trouble, and painful to the mother. I asked her why, and she said she did not know because she had never before been conscious when the after-birth had come away with her other children. She was quite astonished when it appeared without any discomfort, and, since the membranes were twisted at the end and all the placental blood was kept inside them, there was not a drop of hæmorrhage after the birth ; it was completely dry and the vulva was not even stained with blood.

Mrs. —— told me then that with her first baby she had not been conscious for seven or eight hours after the birth, and when she woke up she found herself alone in the room, without a baby, without a nurse, and no one in attendance. She had no knowledge of where the bell was and she wondered what had happened to her ; had she had the baby, was it alive ? When she did see it, she felt very little attraction for it. With the second baby, which weighed 7 lb. odd, she had an instrumental birth, with considerable laceration and tearing, necessitating a number of stitches, and she felt very ill for a long time afterwards. She could not understand at this birth that the baby, being bigger than either of the other two, had not torn her. I may say that I was happy about that myself ; in spite of the internal and external scarring around the vulva and vagina, this larger baby had been born " without a scratch."

And so a perfect natural childbirth ended. The obstetrical conduct of the labour had been quite straightforward ; there was nothing in it, and really all one had to think of in that particular case was patience, perseverence and courage, and to lend one's personal aid by being interested in whatever occurred, by being present to remove the patient's doubts and fears, and by giving

her a hand to hold and a comforting word when she felt she was losing control. Mrs. —— told me she wished it could have been her first child, so that she could have looked forward not only to two more children, but as many as their purse would allow.

Oh, what a beautiful thing is the perfect labour !

This morning, Mrs. ——, aged forty-two, had her second child, the first one having been born some eight years ago. An intelligent, sensible woman who had accepted all the teaching she instinctively knew to be right, who had practised her relaxation to the best of her ability, who had taken a great interest in all the information I had given her upon the mechanism of labour, she reaped her reward.

Her labour commenced at about 7.30 in the morning in the normal manner—rhythmical contractions which she felt in the groin first of all. Her relaxation destroyed all unpleasant sensations ; she was able to doze, and, as she herself told me, felt in only a semi-conscious condition during the first stage, so completely did she relax. At 9.30 she was roused and walked into the labour ward, still entirely free from discomfort. So little had appeared to be going on that I was not sent for until shortly after she had arrived in the labour ward. I found her lying on her side, semi-conscious, quiet and quite contented except, as she explained to me, that there was considerable aching in her back. It was not a pain, she said, but a dull ache ; it extended through to the front, and she felt it quite definitely along the bone and above the bone in front. When this occurs, I always do the same thing—turn the patient over on to her back with a pillow under the shoulders and the head well up, and during the next contraction bring the knees upwards and outwards as far as possible ; this almost invariably moves the pain in the front and relieves the discomfort in the back. This is, of course, different from the sharp acute pain that the persistent occipito posterior will complain of just after full dilatation of the cervix. I then explained to her the use of the gas apparatus, having placed it, as usual, in her hand, so that she could use it when necessary. She said there was no need for it, but it lay on the bed beside her so that she could use it if she wanted.

She told me that the pain in front disappeared after one or two contractions in that position, but that there was still a considerable ache in the back. She thought, possibly, that being forty-two her bones were a little stiffer than they should be ; otherwise she felt quite convinced that there was no need even for the ache that she felt over the lower sacrum. She had not, up to that time, been using contractions very well, so I explained to her the best method of using them. " Wait," I told her, " until the contraction is at the

top—you will understand what I mean ; then draw a long breath and hold it ; do not push violently, but just lean on it." She did this and told me it was very much more comfortable.

Her contractions came at about six-seven minute intervals ; in between them she slept. She was quite comfortable and controlled. When she awakened for a contraction, she said, " Now it is coming," and we lifted up her knees and let her push her feet against our hands. She hung on to her knees once or twice, but managed to do very well without exertion, and I told her not to press violently as the baby would come easily.

And so we went on. At 11.30 the head crowned. Then it was interesting again that she said to me, " I feel quite sure that, having been so badly torn with my last child, I can never get this baby without rupturing again, and last time I remember so clearly, although I was partially anæsthetised, feeling that dreadful sensation of splitting." I assured her that there was very little reason why she should tear this time if she allowed her baby to come in a quiet and controlled manner. She decided, however, at this point, that since the baby was so near she would prefer to take gas. I asked her if it was hurting ; she said it did not hurt, but that she felt so definitely that she could not have this baby without splitting, and that she remembered so vividly the horrible feeling of that " rip," that she would have some gas if I did not mind. For the next four or five contractions she took three or four breaths of gas—certainly not enough to anæsthetise her. Then the baby crowned, and I asked her whether she felt that same sensation now ? She replied that strangely enough it did not feel so tight now as it did at first.

That is a point upon which I should like once again to lay emphasis. Many women will have that distinct fear of splitting at the beginning of dilatation of the vulva, but many of them, too, will lose that sensation after the vulva is practically fully dilated. This is, of course, not an invariable rule, but it has made me wonder sometimes whether the dilatation of the vulva in some way or other does paralyse certain sensory nerves. There is no doubt about the relative anæsthesia of the perineum during the late second stage and for some minutes after the child has been born.

I have already drawn attention to the fact that stitches may be inserted immediately the baby is born with practically no discomfort to the mother.

This baby was born quite perfectly. Mrs. —— had put away her gas apparatus, and assured me there was no discomfort. The baby weighed 7 lb. 7 oz., and passed through the vulva easily without any injury. The rest of the body followed after about a minute, and was found to be a girl. I held the baby up for her to see, and

she presented that same beautiful picture of happiness that I am never tired of describing. She reached over and took its hand and called it all those things which a mother calls a child she has waited and longed for. The cord was rapidly anæmic ; the child cried and stretched as she held it ; I separated it, and the uterus was immediately hard. After five to seven minutes, the uterus started contracting again ; she told me there was a certain amount of tightness about her abdomen, and very soon the cord lengthened some four inches. I put my hand flat on her abdomen, and told her with the next tightening to bear down as she had done before, and her placenta appeared at the vulva, turned inside out, and the placental blood, enclosed in the membranes, came away. There was not 1 oz. of bleeding after the placenta had left the vagina. She then told me that she understood now what she had never understood before ; how the Egyptian women had their babies and walked home so soon afterwards (she had lived in Egypt). She told me she felt she could have done the same with comfort, and with no distress ; she knew she was strong enough, and I agreed. Her pulse had remained at 70–72, she was in no way tired or exhausted, and she felt the whole thing had been a glorious experience.

If this is possible with the old bones of a woman of forty-two, how much more possible should it be with the relatively elastic bones of girls.

Two women medical students were present at this labour. They had asked to see how natural childbirth was conducted. I was as much interested in the expressions upon their faces as I was in the normal, natural childbirth that I was conducting. Their mouths opened, and in silence their eyes opened wide and wider ; they looked at the woman as though she were mad or demented ; they failed to understand that she was speaking the truth. They had, each of them, seen and conducted many labours ; they did not realise the importance of certain simple phenomena of labour. As I came away from the theatre, having explained just how and why this thing had occurred, one of them made a remark which I think most people will make when they first see a natural childbirth. She said, " It's perfectly simple to have a baby like that. If that is what obstetrics means, there is nothing in it." I replied, " Exactly. There is nothing in normal, natural obstetrics except that which is put into it by the scientific and misunderstanding minds. Obstetricians are essential to deal with the abnormal ; they should not complicate the normal."

So Mrs. —— went back to her room. She was perfectly happy and felt she had been through an experience which she would willingly undergo again. But the greatest concentration of her happiness was

upon the delightful child for whom she had waited so long, whom she had feared many times would not arrive because of her advancing years. She became again a young woman and felt, as she told me, that war or no war, she still had much to live for.

For my own part, I felt most grateful for those experiences which had made it possible for me to instruct her in this thing, because it is satisfying to be able to bring this joy to women of mature years who have thought about it, considered it and finally disbelieved it, until experience has proved that after all Nature is the greatest obstetrician.

Mrs. —— had her second baby in the early hours of this morning. At 7.30 last night I had a telephone message to say that her membranes had ruptured ; it was the day upon which her baby was due. She went into the maternity home, and I heard nothing more until 11.30 ; sister's message was that Mrs. —— was having good first-stage contractions, and considered herself to have been in labour for one hour. It was her second baby, and her first baby had been born very nicely indeed ; that is to say, she had followed all the teaching of natural childbirth and the labour proved to be a source of great satisfaction to her. She was justly proud of the natural manner in which her daughter had arrived. I did not, therefore, delay my visit to the maternity home, and found her in the labour ward having good first-stage contractions, relaxing as the contraction came on until she was completely lifeless to all appearances. The lie of the child was left occipito anterior, and the head was rapidly going down deeply into the pelvis. She assured me that there was no discomfort whatever with these contractions, but that the labour bed was hard, and the most comfortable position was to lie upon her back with her shoulders well propped up and her feet resting on the bed with her knees flexed.

I sat with her for an hour, and it was to me an experience which gave great satisfaction. There was absolute consciousness of every phenomenon of her labour ; she discussed freely with me the sensations of the machine, as she called it, which was carrying out its work without any assistance or undue attention from herself. Two women students from the Royal Free Hospital, who were doing their course of midwifery instruction at the home, were invited by Mrs. —— to come in and see her labour. She told me she thought it was every woman's duty, so far as possible, to demonstrate to others that labour need not be and should not be an unpleasant affair, but rather a serious but delectable experience, with the final reward of exhilarating joy and happiness.

At 12.45 the loud cries and moans of a woman in labour from a

neighbouring labour ward floated through to the peaceful room in which we were situated. My patient hastily grasped my hand and looked appealingly to me and said, " How unnecessary it is that she should suffer. Can't you go and help ? " I said that I was indeed grieved, but it was no business of mine to interfere uninvited with other cases, but I assured her that the chances were the cries were not of suffering, but rather of fear. She said that fear was equally bad, and that if she were afraid she certainly could not relax, and would therefore have pain. At 1.45, from the ward on the other side, which is the first labour ward and usually used by private patients and their medical attendants, groans obvious to me to be those of a woman in pain, came loudly across the passage. In a few minutes we heard clearly the crescendo of her yells for help. This was extremely disturbing to my patient, who said, " Surely that is not another ? " I explained to her that a perfectly competent doctor was attending her because I had been out to see whether she was asking for help that could be given by me. This went on for an unhappy quarter of an hour, and I was afraid that this emotional disturbance—which was very severe to Mrs. ——— would actually disrupt the harmony of her own labour, but with persuasion and explanation she accepted my words and quietly proceeded, " I am not having any pain," she said, " why should they ? "

At 2 o'clock she suddenly felt extremely tired. I wondered at first whether it was the emotional strain and the pity that she felt for those who were suffering, or whether it was the end of the first stage, for not infrequently I have noticed in natural childbirth that a definite sense of physical exhaustion comes on at the beginning of the second stage and the end of the first. I asked her if there was any inclination to bear down with the contractions, and she said that she thought it would have been more comfortable with the last one. At the next contraction I noticed that drooping of the eyelids, that wandering sense which suggested that her consciousness was much lower than it had been half an hour previously. The brightness of her conversation left her ; she held my hand and smiled very feebly as if inviting my praise for her efforts. This praise was not unstinted, for it was indeed a gallant sight to witness.

With the next contraction I instructed her how to bear down, and asked her gently to increase her efforts. I left the nurse in charge, and went to fetch the students, who seemed unable to believe that she had passed so smilingly and so comfortably through the first stage. After a few more honest contractions, the rectum bulged. Soon the head appeared, and she looked at me inquiringly and said, " Can I really stretch sufficiently ? It feels as if something must give way." I pointed out to her that that was the invariable

sensation of a conscious woman, but that it was not a true bill, for as the head was born it turned away from the point which felt it must be ruptured. She accepted with confidence my assurance, and in three or four more contractions, a large baby's head was born easily and painlessly into my hands. I told her that her baby's head had arrived and it was a lovely child. She was unwilling to believe that I was not encouraging her by forestalling the event, until I pointed out to her that she could feel the child's head upon her outer thigh. She was incredulous, and looked down and saw her child. I asked her to bear down gently so that the rest of the child could be born ; she said, " Do tell me at once if it is a boy ; we are longing for a boy." And so I was able to lift up to her a crying, beautiful boy baby of 8 lb. 1 oz., as we shortly discovered upon weighing him. Her joy was indeed a picture to behold. There was no question of pain ; she had been instructed only an hour previously in the use of the apparatus of anæsthesia, but she assured us all that there was nothing in this experience but the most unqualified delight. She was too excited to speak as she took the child in her hands before the cord was cut. She said, " I must look carefully ; it is difficult to believe that I have a boy ; it is wonderful." And as she laughed and fondled her child not half a minute old, tears of joy rolled down her cheeks. Thus the picture of natural childbirth was repeated. There was a slight quarter-inch laceration of the forchette, which was done by the child's hand which followed quickly after the head. It was nothing which needed repair. In a quarter of an hour, her uterus expelled the placenta, whole, without effort. As soon as the blood which had followed in the membranes had drained away, there was not a further loss of an ounce of blood ; she felt perfectly well. I asked that his cot should be moved up to her side where she could lie and watch him.

So the labour was ended. Five hours of peaceful anticipation ; five hours of courageous conduct, and then I hope she had the seeds of a happy future planted in their family life. I have rarely seen a more perfect labour ; I have rarely seen a girl of twenty-two competent to conduct herself in such a manner. It was to me a reward which justified all the labour of years, all my labours on behalf of women.

Then an inquiry came for the other two women whose babies had been born that night. I told her in plain words that all was well with them, but alas, one of them was deeply anæsthetised for an hour and a half, her child extracted with forceps, and a large tear of her perineum was repaired. The other one had the perineum repaired later in the night. And so I kept for myself all thoughts,

and merely left her with the knowledge that they were two mothers with two babies. I did not enlarge upon the fact that they were two women injured for life ; that they had two children the arrival of whom they had neither witnessed nor enjoyed, whereas this girl, uninjured, had a son whose very presence in her home would stand as a lasting monument to the physical and spiritual miracle of Nature.

Mrs. ——, a doctor's wife, had her baby at 10 o'clock last night. The previous evening she had rung up to say that she was having contractions once every three minutes. I advised her to go straight into the home. When she arrived, I called upon her and found that she was not in labour at all. I asked her to describe her sensations, and she replied that there really were none that she could describe, but that she felt she must be having contractions, and that she felt they must be coming about once in every three minutes. I examined her vaginally, and found there was no evidence of the dilatation of the cervix ; in fact, the cervix had hardly been taken up at all. It was her first baby ; obviously rather a large one, and she was quite terrified of the whole proceeding. During her pregnancy I had found her to be a difficult subject for training. Although not yet twenty years of age, she had already done two years of nursing. She had gleaned a good deal about childbirth, most of which—in my opinion—was erroneous.

I assured her, therefore, that she was not in labour and advised a good night's rest. There was some evidence of constipation and she offered to take a dose of castor oil because, as she said, it is a good thing to do, and it may hurry things on. Since she suggested this, I was willing that she should do so.

At 8.30 the next morning her dose acted, and she had her bowels freely opened, but unfortunately at that time the membranes ruptured. Three hours later she was definitely having strong first-stage contractions, but they were attended, in her opinion, by the most excruciating pain. This was interesting, because the only place in which she could discover the pain was just above the pubis ; there was no pain in her back and her pulse remained at 65–70, full, strong and unruffled. I was at a loss to give any explanation for this apparently agonising pain which she wore upon her face, in her movements and in her words. My efforts to make her relax were not very successful, but I was not persuaded that she was suffering from the pains of labour, but rather from those pains which, for some years, had been the accompaniment to this great test through which she was rather unwillingly putting herself. I decided, therefore, that this was a justifiable case for a $\frac{1}{4}$ gr. of

morphia—she was a large woman—and the dose did not prove to be in any way excessive. She became sleepy, and her first-stage contractions went on. I visited her several times during the day and found her in a drowsy, satisfied condition. Her reaction to my presence was to half-wake from her sleepy state and mutter to me, not infrequently with a smile, " This pain is more than I can bear." Her pulse remained about 65–70, her respirations were easy, and she was now relaxed and comfortable upon her bed. I did not believe in this pain as a physical entity.

At 7 o'clock she was obviously at the end of her first stage. She went into the labour ward, and the second stage commenced. She explained that the pain had all gone now, but she was quite unable to push down ; she preferred to lie on her right side, saying that to lie on her back was agony, and to lie on her left side was even worse. I could find no reason for this state of things, but since it was definitely in her mind, I allowed it to exist, and gave what help I could. Halfway through the second stage I again asked her to try to lie upon her back ; she did this, and found it quite comfortable so long as her knees were pulled up on to her chest. Then she started to push down violently as well ; she thoroughly awoke to the necessity of labour, and performed the whole act extremely well from that moment onwards. I have rarely seen a more complete state of amnesia ; she was hardly conscious of what was said to her, but if I spoke in a loud voice with my head close to her ear she responded with a smile, and her drooping eyes acquiesced to my suggestions. As a large caput appeared at the vulva, I told her she must take her gas when and if she required it ; she replied that there was no necessity for it and she preferred to get on as she was. The head proper came down on to the perineum shortly afterwards and quite normally distended the tissues, and crowned. She said then that a few whiffs of gas would be helpful, and so she took them, but only for about four or five contractions. At this stage the crowning remained, but the head did not seem to advance ; why that occurred I cannot say, as it is unusual. She then put away the gas, and said quite cheerfully, " I must push this out now." She did so. Her baby weighed 9 lb. ; the perineum was absolutely uninjured in any way. She relaxed when I told her to, and the after-birth followed in the most natural way with no hæmorrhage worth talking about.

As this baby was born, the labour ward was shaken by the concussion of guns and shells ; the first cry of the baby was in concert with hordes of German aeroplanes going over the maternity wards. I looked at Sister, and we wondered what might happen next. The blitz was at its height, but this girl, who had been very

nervous of these things, took her small child in her hands and played with it with all the utter carelessness of joy that only this occasion witnesses. Then she told me she was quite sure that the pain she had suffered had nothing whatever to do with the labour ; she expressed the opinion that it was the aperient she had taken, and was at a loss to explain the absolute absence of discomfort during the second stage. She apologised, as so many do, for the fuss that she had made, and felt that she had indeed behaved in a foolish manner. She went on to explain, however, that when her labour commenced she was persuaded that she would not survive the ordeal; she felt that she was looking death in the face and wondered in what way it would come upon her.

In the meantime her baby was bathed and clad and brought back to her in the cot, suitably swathed and looking extremely nice. I pushed the cot up to the side of her bed, and she turned on to her side and gazed on this work of art, as she called it. She looked at me in a most childish way and said, " You must agree that I have been very clever." She volunteered the information that she had never known real happiness until that moment ; it was all too wonderful for thought, and she would not have missed the arrival of her child for all the world. It was indeed an extremely pretty picture. Nature had blessed her with considerable charm of appearance ; it was a beautiful baby, and as a picture of young motherhood I have rarely seen it improved upon.

But, as I stood and watched these two, still the German hordes went over our heads ; the roar and thrum of their engines, the crash of guns, the bursting of shells and from time to time the crump of their bombs seemed to make the picture of peacefulness in that labour ward unreal, ephemeral or a figment of the imagination, but that was the real picture of life ; it was the permanent record of humanity at its best, and overhead were the emblems of humanity in its most primitive barbarity. I went to the office to ring up her husband, as was promised ; the hospital at which he works answered my telephone call, and I inquired for him. I was told he could not come to the telephone. He had been engaged for five minutes and could not leave the work that had come upon them. I left, therefore, a message with the girl who had answered me. It was not until some hours later that I heard that a few moments before my call arrived, three large high explosive bombs had fallen upon the hospital ; extensive damage had been done, and the husband of the woman with whom I had sat during that raid was nowhere to be found. But as his child was born, he was searching among the ruins of his hospital for any who might have suffered injury from that dastardly act. The girl who spoke to me

did not know whether he had been killed or whether he had survived. Happily he was uninjured.

This morning, in spite of all, I saw the husband, the wife and their child sitting in complete, calm and unruffled happiness, the sunshine pouring in through the window of her room. The night had gone ; destruction had passed by them ; how evil indeed was war to me when in the presence of this divine revelation of new life.

Perhaps the circumstances of this case impressed me more from the point of view of the importance of an obstetrician's calling than from any obstetric feature that the case presented. I think perhaps I shall never forget this series of events. In the immediate presence of childbirth there was no thought of fear within any mind in that labour ward ; our work was the privilege of those who assist in laying the foundations of a fuller life ; our thoughts were far beyond the activities of those who seek to destroy. When I went out, having put on my tin hat and placed my gas mask beside me in the car, and drove for three miles through the blitz that was harrassing the countryside, I was possessed of a sense of elation that here indeed was the true calling of an obstetrician.

CHAPTER XVII

IN CONCLUSION

As this imperfect collection of observations is concluded, it may well be asked of me, " Why have you written this book ? " There is no more exacting task and no occupation more thankless than the public expression of heretical views. Our profession welcomes those new shoots that spring from the paternal bole and serenely bloom on the sustenance that flows directly from the parental source. But green things that appear in unorthodox shapes have little hope of survival unless they bear fruit before they are noticed. A contribution to medical literature should be the result of experience and meditation, for without experience it is unconvincing and without meditation it is presumptuous.

It is nearly ten years since I published my first series of observations and outlined the theory and practice of natural childbirth. That teaching has borne much fruit, and so I write more fully, hoping, not without justification, that more of my medical brethren may be persuaded to give this method fair and prolonged trial. I am not prompted by a missionary zeal that seeks to proselytise the obstetric world, but only to invite attention to bare and irrefutable facts. Much that has been written is controversial, but whether the anatomy, physiology, neurology, or psychology concerned in the function of parturition is accurately or inaccurately stated, the composite parts of this theory have dovetailed so satisfactorily that practice made upon the assumption of their truth has succeeded beyond the most optimistic expectations. This success cannot be denied ; it has survived the most exacting examination ; therefore, the foundations upon which it is built are probably sound in general principle.

It has been possible to answer certain criticisms and imputations ; the results in many cases have been so astounding that those who have witnessed them allege the employment of some strange form of mesmerism. This has been shown to be without any foundation of fact. It has also been suggested that these results are due to my own peculiar personality—whatever that may mean. There are records, however, of hundreds of natural labours conducted by my methods but at which I was not present. Doctors and midwives who are practising these methods frequently witness happy, painless labours.

Claye and others have stated that no anæsthetic is allowed.

This is absolutely untrue. Every woman has the anæsthetic apparatus in her hand to use if she desires to do so. It is the absence of unbearable pain which is remarkable, not the absence of anæsthesia.

I have been told that there is not time to carry out this education and training, and that doctors need not and cannot be with women in labour until the end of the second stage. My answer is that experience has shown that the time taken to educate the average woman during pregnancy, and the hour or so spent with her during labour, is not more than a medical man should be well able to afford if he undertakes obstetric cases. I have been told that it is impossible to apply this practice in hospitals and large institutions. There is no doubt whatever that antenatal clinics can undertake and do, in many places throughout the country, undertake this instruction with interest and advantage to the patients, and without any undue waste of time. A satisfactory practice of obstetrics must not be blamed because the present-day administration of this art is conducted by inadequate staffs and in surroundings unsuitable for such important work. I suggest that very little change would make it possible for this teaching to be applied throughout the country to the general benefit of obstetric practice, without in any way adding to its difficulties. I am willing to admit that considerable courage would be necessary on the part of those in authority. I believe that in this matter—as in most other things—courage could overcome all the difficulties that at present appear to be insurmountable.

It is, therefore, to the youth of our profession that I appeal; to those who have just qualified and to those who are about to qualify. It is for you to join in the battle against pain. In the march of this great and noble science of which you have become worthy soldiers, you must not call a halt and sit serenely complacent where your seniors left you; soon they will retire and hand on to you the leadership; you must progress to further objectives, to a higher attainment and to perfection within our science.

Nearly fifty years ago, Sir William Osler wrote, "The pains and woes of the body to which we doctors minister are decreasing at an extraordinary rate, and in a way that makes one fairly gasp in hopeful anticipation" ("Aequanimitas"). Each one of you has it within his power to observe carefully the phenomena of labour; each one of you has the birthright of investigation. Do not accept the conservative teaching of a past generation without careful examination. For the most part, such teaching will stand scrutiny and will be proved correct in general principle. But from time to time you will be amazed at the inadequacy of the evidence upon

which accepted principles are borne. Be critical of culture ; look long and carefully before you accept its tenets ; take notice of the subtle ways and means by which youth is robbed of its power and its instinctive genius. Be accurate in your deductions, and delve deeply into the details of each succeeding problem. Analyse your observations, and do not be slow to ask "why." Develop an inquiring mind ; seek guidance and advice whilst you have around you those competent and willing to help you. There is no reason to be humble in your questioning, and certainly no justification for aggression in your differing. Learn from your mistakes, for if you seek honestly the truth, the errors that you make will be of service in your search. As you scramble from one pitfall to the next, you will gain strength and experience. The borderlands of the realm of knowledge are shrouded in a mist which is not penetrated by the earliest efforts of the beginner. As he gains a greater foothold within those realms, so the mist clears, until he finds the vista of unending possibility, the existence of which he had not previously envisaged. There is no such thing as knowing all. Cowper wrote :

> Knowledge is proud that he has learned so much,
> Wisdom is humble that he knows no more.

If, therefore, you feel humble because of your limited accomplishments, recognise that in humility alone lies the true urge and goad to further progress. If you have read the preceding chapters of this book, I do not ask you to accept one written word, but rather to recognise the possibilities of the theory and practice which I set before you. When occasion arises, try to apply these principles ; you will fail before you have learned to carry them out in detail, but soon you will succeed in such a way that the truth of the teaching will appeal to you as being worthy of further application. I give you the assurance that you will succeed if you persevere. I know that if you strive manfully you will find in obstetrics a new life, a new science and a new benefit to humanity. More frequently the thought has passed my mind : How will they take success ? How will they balance in the scales the gratitude of the women they have attended with the criticisms of those whom they have not attended ? I urge you to be discreet in your pronouncements ; keep your successes quietly to yourself ; you should never be the source of propaganda. Discuss freely with those who would discuss with you, but do not try to persuade the disbeliever. Remember that he has no practical experience with which to justify his intolerant attitude. Neither is it possible for you to persuade a woman who has had a painful labour that her pain was unnecessary or a misunderstanding. She has had pain, and she will tell you

that she had a very clever doctor in attendance. Woman cannot be persuaded by mere man, but only by members of her own sex who will quietly differ from her and smile, with added satisfaction, at their own experiences.

You cannot persuade a daughter that her mother knows nothing of childbirth, and there are not many mothers who are either in a position to, or willing to, teach their daughters that labour is a painless, happy thing. You cannot persuade a doctor that the cries and groans of his patient might have been prevented had he understood the phenomena of labour. These people and many others will either laugh at you or be angered by your opinion. Let women speak who have borne their children naturally, and who know the truth. Sit silently and listen to the experiences of those who have given these practices a fair trial—those who have worked until they have understood labour. There you will hear no adverse criticism or dissentient note. But as yet these voices are few and far between, although you will rejoice at meeting them in unexpected places. The voluble spokesmen of idle ignorance are more frequently heard. Be tolerant, for they are just and honest with few exceptions. They have only known painful labours, because they have not been aware of any teaching that can mitigate suffering without endangering the health of mother and child. Why should they accept the opinion of a young man when they have learned from years of experience that women whom they attend in labour suffer pain?

Yes, you who set out with high ambitions and ideals for the improvement of the art and science of obstetrics will meet with unexpected and exasperating difficulties. The teaching and training of your student and intern days will fit you for all emergencies. Academic foundations are invaluable and must be soundly rooted, for it is from them that the high standard of your work results. For my own part I have found the greatest opposition within the ranks of our own profession, but I have not had any desire to shield myself from insinuation, however invidious. The inviolable sanctuary of truth, well proved in the fires of long experience, is not likely to be shaken by the assaults of ignorance. For those who have not seen this natural childbirth cannot speak of it with authority. The criticisms of those who have not practised it are indeed empty. What would we reply to one who said, " The works of Plato are not worth reading because I cannot understand Greek." We would say, " But listen to him in a language you can understand." From Phædrus, Euthyphron and Lysis you may learn something of the beautiful, of holiness and of friendship that you have not known before.

I have tried to put in simple words the friendliness, the beauty and even the holiness of childbirth, but its magnificence can only be felt by those who have learned to read in the original this masterpiece of the Creator. But remember, to the public from whom you have to earn your living this is heresy, this is something new ; it is something not readily understood. Your shield and buckler will be hard work and quiet determination. Resolve to be patient, for by the results of your work you will be known. Men often value themselves by what they know they can do, forgetting that the world only values them by what they have done. Do not be disturbed by gossip ; it is a doctor's lot to be subjected to the sadistic criticisms of those who do not know him. Anonymous critics are those who hide behind high walls and throw mud or bouquets, according to the disease from which they suffer, at those who march along the high road of freedom. Whether you are flattered or bespattered, pass on ; they will not be allowed to meet you face to face. Beware lest word or look betrays resentment at the work of others. Unless we are in a position of authority, we have to watch tragedies that may well make the blood of him who has been more fortunate in his training boil with indignation. It is unlikely that you will escape the scorn of the Urban District Icon, who has been raised to his pedestal by the whispered adulations of his devotees. He wears a white coat and an ingratiating smile. The orb of omniscience rests lightly in his rubber-gloved left hand, and in his right he holds the sceptre of his own opinion. An oriflamme, emblazoned with licentiates, waves with modest clarity in his autogenous breeze. He is protected from the light of Nature by a canopy of self-confidence, which also serves to ward off any insidious attacks of Truth. You will hear his praises sung ; his genius with the forceps ; the neatness of his stitching after labour ; the convenience of his inductions and innumerable Cæsarian sections.

But let your practice be founded upon the judgment of the intelligent, and your reputation upon the honest opinion of those who are in the best position to judge. Above all, your own personal satisfaction will raise you to a different plane ; your work will be in a different cause ; you will not be numbered among the " Gehazis who seek only the shekels." Your belief is not in to-day, but rather to-morrow and those distant to-morrows which will bring nearer to man his ultimate heritage. Your faith is in the law of Nature ; your science an adjuvant and not an impediment to its implementation.

But medicine is a science of opinion, and opinions differ, not only in diagnosis and treatment but in philosophy and ideal. In obstet-

rics you must form your own philosophy without fear, and observe with equanimity the ideals of those about you.

The privilege of attending women in childbirth is far greater than you are taught to realise. The public applaud the genius of skilled surgeons ; famous physicians are beloved and respected for their healing power ; great gynæcologists are both surgeons and physicians within a limited field. Their lives are given up to the noble work of succouring the sick, curing the diseased and mending the broken. The advances that have been made in these sciences have just lately earned the praise and gratitude of the world. The stern course that an ever accelerating life has set for the human race leaves many casualties by the wayside. Those who come of stock ill-suited for the struggle break down and need attention ; the mental equipment of a high percentage of the people of to-day is inadequate for the task imposed upon it ; it shows signs of stress ; it requires adjustment and support. The physical manifestations of disease, surgical, medical and gynæcological, are frequently the direct sequelæ of functional derangements of the nervous system.

So the casualties of living are the first call of the medical profession. But obstetricians do not work among casualties ; their work is primarily among the supremely healthy members of the community. They watch over and improve original models from the great factories of human life ; their responsibility is to improve the stock and render it fit to meet the new demands that modern communal existence makes upon each succeeding generation.

Surgery and medicine are mainly concerned with repairs, patchings and renovations. The less efficient the stock in terms of survival, so much greater is the demand for medical service. Since when have repair shops been more important than the production plant ? In the early days of motoring, garages were full of broken-down machines, but production has been improved ; the weaknesses that predisposed to unreliability were discovered and in due course rectified. To-day it is only the inferior makes that require the attention of mechanics. Such models have been evolved that we almost forget the relative reliability of the modern machine if it is properly cared for. This is not only due to the use of better materials, but also to more complete knowledge of construction. Education and research are the essentials of progress, particularly in child production. This does not depend upon parturition only. The mother is the factory, and by education and care she can be made more efficient in the art of motherhood. Her mind is of even greater importance than her physical state, for motherhood is of the mind, and the body is usually subjected to the mental processes, unless any gross abnormality exists. There is a vast territory

around and about maternity which is still unexplored. If there is anything in these pages which has not been previously observed or practised, it is culled from the fringes of this waste of potential enlightenment.

Each stone which has been turned in search of explanation has revealed a rock, beneath which rests a hidden truth. Every fresh endeavour to perfect the art of natural motherhood has impressed upon me the magnitude of our task. It is with envy that I look upon the students of to-day. A hundred paths lie open, inviting them to walk unhindered to the granaries of greater knowledge, demanding only that they shall bring back such store as will be profitable to their fellow creatures. There may be found the solution to innumerable problems. They will have within their power the *organisation of education* of mothers, which to-day can only be carried out in few places and by a small number of teachers. They will be able to attack the calamitous absurdity of our social system which prevents thousands of our best women from having the families they crave for because they *have not the money* necessary to feed, clothe and educate more than two children. We are a Commonwealth of Nations, finding over fourteen million pounds a day in order to defeat an aggressor. How much do we find to defeat the insidious evil which we have allowed to creep into the vitals of our race? The canker of nulliparity is only worse than families—so-called—of one or two children. "Too little money." Every week and almost every day I hear the same disgruntled remark, "We simply cannot afford any more." The allowances from taxes are inadequate. The young mother of to-day watches her childless friends; their cost of living and their responsibilities are less in every way; their clothes, their recreations and their entertainments appeal to her as the price she pays for her children. No, she cannot have any more or she will never be able to go anywhere or do anything. And so at an early age an affectionate, happy couple with one or two children adopt contraception as a financial necessity. "Better than poverty and all its devastating anxieties," I am told, and I cannot disagree. It is not healthy recreation, in this life of rush and turmoil, that I disagree with. It is not—under these circumstances—contraception that I quarrel with, but relative poverty, particularly in the middle classes. Look closely into the homes of those who struggle to keep and educate two children, those whose job depends upon their appearance of affluence. Behind the scenes you will find financial strain, real poverty, self denial, and, at an early age, contraception and all its mental stresses and physical disappointments. It is the spirit of home life and parenthood which suffers. Love itself is starved and often blamed for its own decline.

When love goes, anything may go, but worst of all the most glorious gift of womanhood remains inhibited and immature. The spirit of motherhood is never fully developed ; our social system is gradually crushing the most powerful force for real goodness that is known to the human race. Here indeed is a problem for the rising generation of obstetricians ; make it possible for healthy married women to have all the children they want ; make it profitable, and one of the main causes of domestic unhappiness and social unrest will fade into thin air. Give us back the Victorian mothers of seven and ten children, and we shall again be swayed by the quiet but irresistible goodness of true motherhood.

Human nature has not changed since the days of the Psalmist. The man who has a " full quiver " and adequate maintenance is the peace-loving worker whose presence in the community is an influence towards moderation and reason. But should his home be in jeopardy or his hearth in danger, he knows no fear, but flings himself into the fray with the violence of desperation. Is it for his own comfort or for his childless wife he fights to the death ? Is it in the cause of justice among the nations or is it for children who crowd in his small cottage and climb upon his knee ? Whence is the power in a man's arm ? Let fathers of families answer and husbands with good wives who mother their growing sons and daughters. The phylogenetic development of man has equipped him physiologically and mentally to fight for the protection of his children and their mother. Perhaps that is why peace-loving men who are forced into battle by an aggressive enemy fight with such fury that the professional gladiator is amazed.

Amongst the mothers of large families we find the grand old ladies of our race whose calm yet forceful personalities radiate strength and attract affection. How many of the greatest men in history will unhesitatingly ascribe their success in life to the influence of their family life and home ?

Therefore, the student of to-day has the very foundations of society to investigate ; in his hand lies the power to wield a mighty weapon in the cause of progress within the human race. I do not extol the art of motherhood without a sincere belief that it is a force of incomprehensible magnitude and worthy of the highest place among the major considerations of our time. Millions are spent each year on educating children, a high percentage of whom have suffered the strain of unnatural birth, whereas a few thousands a year spent on educating mothers might eliminate *ab initio* the congenital conflicts of the mind of which Freud has written, and the intracellular injuries within the cerebral cortex to which Crile has drawn attention.

If a fraction of the amount now spent upon the so-called education of children up to the age of fifteen or sixteen were allocated to the instruction of youths and maidens in the elementary knowledge of their primary biological functions, much misery and discontent would be avoided. Such teaching to girls is becoming more desirable with each generation. Respect and reverence for motherhood are the natural reactions to sensible instruction in these matters. The early years of maturity are cleansed from those doubts and fears which spring from ignorance. The adventurous voyage of marriage in a ship made seaworthy by education and understanding is more likely to survive the rough waters of life than that which is fitted out by ignorance for joy trips on calm blue waters only. No one is more aware of this than the obstetrician from whom young married women seek advice.

I am persuaded that our work should be that of physicians to women. No girl should leave school without the direct or indirect influence of our teaching ; no young woman should enter a factory to earn her living, or be presented, or " do " her debutante season, without adequate knowledge. We should be prepared to discuss the problems of those about to marry. as well as the most intimate details of marriage, with those who come to us for help and advice in times of trouble or difficulty. Conception, pregnancy and parturition are our accepted spheres of activity, but they depend for their perfection to a large extent upon earlier training. And after the puerperium our lot should be to continue in the personal contact we have made during childbirth, and to be an oracle to whom reference can be made during the years of recurrent motherhood. Here is more than enough for the mind of one individual, yet in these few phases of womanhood a physician holds the life line of civilisation.

To-day, antenatal clinics are doing, in many places, magnificent work in preparing women for labour. The home life and economic conditions of women of the poorer classes are investigated, and no effort is spared to make motherhood a joy and not a burden. You will have to ask yourselves whether the middle and upper classes, who pay for private attention, receive the same standard of care and attention as " hospital " folk. Whatever your reactions to the discoveries you make concerning the practice of obstetrics in all classes of society, bear in mind a wide and philosophical attitude towards its ultimate value to humanity. Aim high and bravely ; dare to aspire to new standards. To-day the world passes through the ordeal by war. The combat is not of peoples but of philosophies. The grim hosts of materialism have combined to overthrow the spiritual forces of life. You of the rising generation of scientists will

be called upon to make some sense of the universe, and you will be unable to do so without a belief in ultimate purpose. Sir Arthur Keith wrote, " I cannot help feeling that the darkness in which the final secret of the Universe lies hid is part of a Great Design." Frances Mason edited a book called " The Great Design " (Duckworth, 1934). In this collection fourteen renowned scientists, each writing in relation to his own subject, state clearly their belief in a power greater than science. They are convinced that a spiritual influence exists as a reality and not an assumption. It is from the order and precision of natural phenomena that this deduction has been made by men whose genius has enabled them to penetrate the mysteries of Nature more deeply than their contemporaries.

As obstetricians, you will be in constant association with the most beautiful of all natural functions ; it is not just the assistance of women in childbirth. If there is design in the universe, and if that design is of spiritual force, then the birth of a child must be an incident of spiritual importance, for it is the production of a new vehicle for elements of that force which will fulfil the purpose of the universe. This brings us near to Goethe's rumination that " the whole purpose of the world seems to be to provide a physical basis for the growth of Spirit."

Surely there is a law which enables a woman to bear children in the knowledge of her inestimable privilege. The importance of motherhood must be worthy of much greater attention than it has yet received. Some organisation which will instruct and educate, as well as train mentally and physically, the mothers of to-morrow, is only one of the great responsibilities that rests upon your shoulders. Howard Haggard, in the opening sentences of his book " Devils, Drugs and Doctors " (Heinemann, London, 1929), writes, " The advances and regressions of civilisation are nowhere seen more clearly than in the story of childbirth." To-day we stand on the brink of a new world ; it is unlikely that the future will depend upon money and personal power. The fundamental urges of masses which have found truth and hope in social enlightenment must be accepted as necessities of racial progress. Motherhood is the common denominator of international relations ; it is the one mutual possession which is shared both in body and soul by women of all races, creeds and colours.

From my contact with men and women of all classes, I have been led to believe that it is for homes and families our people will cry out. The demand will be for parenthood and reward for their work adequate to provide for children in health and happiness. The greatest force behind the peace and prosperity of a nation emanates

unseen and unheard from the mothers in their homes. Samuel Taylor Coleridge wrote in " The Three Graces " :

> A mother is a mother still
> The holiest thing alive.

The health of mothers and their babies should be the first consideration of an obstetrician. The injuries inflicted upon both mother and child have results which influence whole communities. I do not refer to gross and obvious lesions only, but to such things as pains and fears ; nights of horror and vivid memories of agony which scar for all time the mind that should be fortified by the beauty of its first sweet thrill of mother love. In my library there are thirty-seven volumes, each leather bound and stamped in gold, " Mother's Letters." From 1915 to 1941. These manuscripts of indescribable beauty are not to an only son, for I was number six of seven children born in nine years. Schooldays and Cambridge, the London Hospital, the Great War, are recalled and reviewed in terms of sympathy and understanding, admonition and advice. Betrothal, marriage and parenthood are discussed with me in words of which Madame de Sévigné might well have been proud. Year after year this fount of mother love has poured its influence into my life and still, at eighty-six, this grand old lady fills me with pride when I read her views on things of to-day, written in the light of long years of quiet observation and deduction. A few years ago, when her eldest child died at the age of fifty-six, she wrote, " Now that she has been taken to rest at this early age, I think back upon the noble self-sacrifice of her life, but my mind seems to rush past the intervening years, and I recall most vividly of all the cry of my first-born child as I held her in my hands a few moments after her birth." At over eighty years of age, that sweet initiation into the great masonry of motherhood still shone so clearly above all other lights and shades of her daughter's life, that she added, " It seems as if it were but yesterday."

There is no logical reason to presume that the influence of one mother is exceptional. It is my belief that I quote an example only from many thousands. There would be many more with each generation if this great source of power were fostered and nourished by the obstetric physicians of to-day. The science of obstetrics should no longer be considered the bread and butter of young consultants until and only until a gynæcological practice is established. It should not be the rather boring but relatively profitable necessity of a busy general practitioner. It must be recognised as an invaluable adjunct to the health and happiness of humanity.

I express to you only my personal opinions, and offer for your

consideration certain aspects of our calling which should raise the obstetrician to the highest place among the builders of our future race. I have just received a brochure from the Parents' Association called " Civics," in which I read these words : " Our ultimate goal, therefore, lies far beyond our present transitory life. While we must live this present life for others, fully and actively, we must also try to make contact now with the higher Wisdom and Beauty, as yet only partially revealed, which lies beyond."

You must make your choice now, and to your innermost self lay down the principles upon which your future will unfold. There are many paths leading to the rock of a physician's calling. Along the well-worn roads thousands pass, blindly following the lead of orthodoxy, pushing and jostling in a throng which steadily advances with the years to a comfortable plateau called Mediocrity. Here men gird themselves with mental and material armour, and search the descent to old age for respectable nooks and crannies where they may rest and watch the sun go down. It is possible to decorate a well-selected nidus with an accolade, so that those who pass by may whisper to their friends, " Behold ! "

There are also the untrodden paths which require not only youth, but freedom and fortitude. Those of you who seek a new truth must blaze a trail of your own. The jewels of our science lie off the beaten track. Press on in danger ; with the risk of failure you have the urge to persevere. You will clamber among landmarks accepted by your forbears as immutable. Accept nothing, for under each established fact is the foundation of a new future. Gold is hidden in the solid vein of quartz. Climb up alone the precipice that leads to no plateau, but only to high peaks from which you can look down and see the truth you have uncovered on your way. You need no social armour in your isolation, seek no comfortable haven of rest : sharpen your axe, respike your shoes and struggle on, conscious always of the vision of youth, guided by the hand of experience to a greater reward than public recognition.

Pioneers pass on unheard and unlamented until the trail they blazed is followed by a few who have believed. At the end they are discovered where their life's work finished, mourned only by the wild flowers of the wilderness they loved.

APPENDIX

OBSERVATIONS OF MOTHERS UPON THEIR LABOURS

A SHORT explanation is necessary of the origin of the questions which have been answered in the personal observations of mothers recorded below.

For some years the opinions of women whose labours had been relatively painless were quoted from records that I had made myself of their statements. It became apparent, however, that these statements were subjected to considerable criticism as being exaggerations or only part of the truth. I discussed this difficult situation with Professor Browne, and came to the conclusion that the best way of over-riding this obstacle would be to obtain from the women themselves their own personal opinions upon the education, conduct and result of their labours.

The six questions set out below were considered adequate to cover these points, and although in the light of experience they might have been improved, they have been adhered to for the sake of uniformity. We arranged that the next six cases I attended should be recorded, and the women asked to answer the questions. It was impressed upon them that their replies were to assist in an accurate scientific observation, and therefore as far as possible a simple statement of fact should be made, and all personal references to myself or anyone else avoided. First and foremost the truth and nothing but the truth was required, and any effort to avoid hurting my feelings would render their replies entirely valueless so far as this investigation was concerned. Shortly afterwards I wrote the following letter to Professor Browne, and enclosed the replies which are numbered 1 to 6. Not feeling satisfied myself that so few cases were sufficient for the purpose required, I continued to invite replies from about thirty of my patients. A few preferred not to answer the questions, but to write their impressions in their own words.

I have retained the originals of all these letters, and what is perhaps of even greater importance, in nearly every case the writer has expressed her willingness to speak more fully about her experience to any obstetricians of authority who may wish to make further inquiries. In that way a source of information has become available more valuable than any personal records of my own, for there can be little reason to presume that such information is unreliable.

DEAR PROFESSOR BROWNE,

With reference to these six cases, whose personal observations I enclose, I append these notes :

(1) These cases were not selected, but were the next six cases I attended after the day we met at the Royal Society of Medicine, with one exception: a primipara with twins, who had had scarlet fever and whose kidneys broke down during labour.

(2) Not any of these ladies knows any one of the others, and none were acquainted with the replies of any other.

(3) They all realised that anæsthetic apparatus was ready for immediate use if they expressed the desire to have it.

(4) These records are not exceptional, and a number of similar cases can be collected if required.

(5) The types represented are :

(*a*) A children's nurse before marriage.
(*b*) A schoolmistress before marriage.
(*c*) The daughter of a wealthy merchant.
(*d*) A lady well known in London society.
(*e*) The private secretary to a barrister before marriage.
(*f*) The wife of an American of independent means.

(These are not in the numbered order of the cases.)

(6) The following analysis, though too small to be convincing, is interesting because of the importance placed by some authorities upon these matters in relation to childbirth :

(*a*)	*Age of mother*	*Weight of baby at birth*	*Number in family*
Case 1	30	7 lb. 10 oz.	2nd baby
Case 2	38	6 lb. 6 oz.	1st baby
Case 3	22	8 lb. 10 oz.	2nd baby
Case 4	46	9 lb. 2 oz.	5th baby
Case 5	28	7 lb. 2 oz.	1st baby
Case 6	26	7 lb. 7 oz.	1st baby

(*b*) Three of the cases are town-bred and were brought up to lead sedentary lives. Three led open-air lives as children and were brought up to run wild in country houses for most of the year.

(*c*) *Habitual Diet.* Three of them followed a simple, plain diet, practically teetotallers ; one has been a vegetarian for some years but takes wines ; two eat and drink well of " anything and everything going."

(*d*) *Type.* Three are domestic in thought and habit. Three definitely intellectual in education and accomplishment.

(7) It appears, therefore, that these six ladies have only one thing in common—a full realisation of the fundamental happiness of childbirth.

With best wishes.

THE QUESTIONS

1. Did you find the practice of relaxation during pregnancy in any way irksome or difficult ?
2. Did the teaching generally—and our conversations—give you confidence in and understanding of normal labour ?
3. When your baby started to come, were you able to relax during the muscular contractions ?
4. Did the peacefulness in which your labour was conducted appeal to you as being helpful ?
5. You had your baby without any anæsthetic. Do you feel now that any part of your experience would have justified an anæsthetic being given ?

   You were conscious at the arrival of your baby and you heard it cry for the first time. Would you have preferred to have been unconscious of all that was going on at this time ?
6. Do you look back upon the arrival of your baby as a pleasing experience or a terrifying one that you would wish to forget ?
7. If the baby born at the beginning of this year was not the first child,

how do you compare his arrival in your own mind with the arrival of any previous babies?

If there are any other remarks you could make, I would value a frank statement from you, as it is only from the mothers themselves that I can learn to perfect their guidance through childbirth as Nature intended it to be.

No. 1.

Age of Mother: 30.
Weight of Baby at birth: 7 lb. 10 oz.
Previous babies: 1.

1. Not irksome, and only difficult to begin with and because I have little inclination to or capacity for it. Once I had learned to relax, however, I not only enjoyed my daily periods of relaxation, but could definitely feel benefit from them, mental and physical. I still make myself take time for relaxation and feel very much renewed always.
2. Only to a certain extent, as I had to overcome the very bad mental picture of my first baby—decidedly unnormal in arrival—and I fear this made me rather incredulous. Although I believed a normal labour to be a possible and probable thing, I did not anticipate it being so in my case. I had experienced no such teaching previously, and frankly thought it "a tale" to begin with, but my confidence grew, and the knowledge given me materially benefited me when the baby began to arrive.
3. Yes, and after making a great effort to do so, found that it helped me enormously, and I gained the conviction that the contractions were accomplishing something. The practice of keeping my eyes open instead of closing them against the contractions was also a surprisingly helpful one.
4. Yes, it did. My first baby's arrival had none of this peaceful, confident-that-all-would-be-well atmosphere, and I found it enormously encouraging and I was able to concentrate upon what I had to do instead of struggling along in a bewildered and rather lonely manner. The atmosphere created definitely gave me courage and resolve to help myself and the baby.
5. Having my baby *without* an anæsthetic and *with* a certain amount of difficulty was infinitely preferable to having one *with* an anæsthetic, as in my first experience. I do not consider I needed any and am glad I did not have it. I did not previously believe it to be possible, but I know now that I have benefited in many ways from the experience. I had a very definite sense of elation and achievement immediately the baby arrived, and a strong conviction that nothing again would ever appear too difficult to overcome, also a feeling of rightness and completeness over a good job done. The baby's cry and seeing for myself that he was all right was a most comforting experience and, I believe, a great "shock-absorber"!!
6. Not terrifying at all, except in anticipation, and I believe that a natural birth automatically allows you to forget the actual labour—or at least its discomfort and pain. There is nothing left with me that I actively want to forget; the second baby's birth leaves no bad pictures as the first one did. I felt very well from the moment he arrived, and inordinately happy and very hungry, whereas my previous experience was one of feeling ill and weakened for some time.
7. I think I have inadvertantly answered this in a previous question. There just is no comparison in my mind. The second baby had a

good start and the first baby had a *bad* one, and this is paramount in the child—the first one was sometime recovering from the shock to her system but this one had no setbacks. The fact of having no stitches put in was to me a great relief after my first experience of five, and days of real discomfort and pain, and I had imagined it inevitable. Nor, this time, was catheterising necessary—a process I dreaded and previously had a week of. My mental reactions, too, were so much happier; no slow recovery with depressions, but a feeling as of a " new lease of life " and a genuine longing to be up and doing again.

My strongest feeling on this subject is that fear holds up the whole process of childbirth and that nine out of ten women are afraid, and I would give a lot to know that something was to be done *now* to prevent future mothers from entering upon this natural function with unnatural and retarding ideas, because I believe (except in abnormal cases) that women would have easier confinements if this were done. I would like, too, to think that women could be taught to do their bit in producing their babies instead of being filled with the idea that Nature, the doctor and anæsthesia would do it all for them. In my own first experience I knew nothing, neither what was expected of me nor how best I could help the baby into the world, nor was I guided in any way, and I do believe that if women understood Nature's processes and were prepared and taught to meet them courageously *and* with the will to do a really hard day's work on the job, " having babies " would not be the nightmare it now is to the majority.

No 2

Age of Mother : 38.
Weight of Baby at birth : 6 lb. 6 oz.
Previous babies : None.

1. I did find the practice of relaxation during pregnancy somewhat irksome and difficult at first. It was not always easy to find the time in which to relax, and it often meant a rush beforehand which made relaxation come slowly. I had never rested in any way in the afternoon before, and it gave me a feeling of being shut off from the world which certainly irked at times. But as time went on I found it much easier and got to look forward to it with enjoyment, realising that the immediate result would be a contented evening instead of a restless one
2. The teaching generally, and your conversations, gave me complete confidence. Surely that is a much better thing than understanding.
3. Yes, after the suggestion had been made to me.
4. The peacefulness in which my labour was conducted was very gratifying and helpful, following as it did on a period of intense loneliness.
5. No, I am very glad that I was not unconscious of all that was going on at the time, because if I had been I should have missed the most beautiful experience of my life.
6 I look back now upon the arrival of my child as a very pleasing experience, and I would love to go through it all again.

No. 3.

Age of Mother : 22.
Weight of Baby at birth : 8 lb. 10 oz.
Previous babies : 1.

1 I did not find practising relaxation in the least bit irksome, in fact very much the opposite. I used to do it before going to sleep at night and

had the most completely restful nights as the result of relaxation, I always thought.

2. The teaching gave me great confidence. I found it all most interesting, and owing to the teaching it seemed to me to be all so simple and straightforward, and nothing to be afraid of.
3. I think I was able to relax to a very large degree. I kept it in my mind all the time.
4. The peace and calm in which everything was conducted gave me great confidence, and I am sure helped me enormously to be peaceful and calm myself.
5. I did not in any way want an anæsthetic, and would not have had one at any price. By relaxing in between contractions I seemed to be quite ready for the next one again. I would not have missed hearing my baby's cry for anything in the world—it is quite unthinkable to me to be unconscious at *such* a moment.
6. I look back upon the moments of the births of my children as ones of the most wonderful and complete happiness of my life ; something never to be forgotten and to be treasured my whole life through ; only comparable to the happiness of my wedding day.
7. Although I was not a patient of Dr. Dick Read's for my first baby, I practised the Natural Childbirth methods. I was out to dinner when the first suspicion of his coming began, and he arrived within the next two hours, weighing 8 lb. 2 oz. My daughter, who arrived under Dr. Dick Read's care this year, was even quicker, and weighed 8 lb. 10 oz. In neither case did I have an anæsthetic, and I did not want it. The old family doctor in whose care I was for my first baby was unaware that I was practising the Natural Childbirth methods as I felt he might disapprove of them. He did not arrive until sometime after the birth of the baby.

I am a strict vegetarian of some five years' standing, and I also drink a great deal of raspberry tea during my pregnancies. I lead as a rule a very active life, and during the time continue to lead it up to the very last minute.

I did not suffer from any of the ordinary " complaints " such as heart-burn, swollen ankles, etc., but felt healthy and energetic all the time.

I feel that it is the birthright of every mother (and baby) to experience the sheer bliss, for no other word is strong enough, that I experienced at the time of my babies' births.

No. 4.

Age of Mother : 46.
Weight of Baby at birth : 9 lb. 2 oz.
Previous babies : 4.

1. No, I did not.
2. Absolute confidence.
3. Very easily, in fact I slept between the contractions and felt thoroughly comfortable.
4. Most helpful, and I had no fear from beginning to end.
5. No, I do not consider it the least necessary to have an anæsthetic, as it would take away the joy of seeing your baby born and hearing its first cry.
6. In my opinion it is the most beautiful experience that any woman could wish for.
7. Comparing my last baby with my previous children, it was much the easiest confinement I have experienced, and I consider that if every

woman could have her baby by your method of teaching, it would destroy all fear of childbirth.

No. 5.

Age of Mother : 28.
Weight of Baby at birth : 7 lb. 2 oz.
Previous babies : None.

1. No.
2. Yes.
3. Yes.
4. Yes.
5. No.
6. No.
7. A very pleasing experience.

From the beginning of labour I carried out your advice, and the arrival of my baby was a great satisfaction to me, and I can truthfully say that I should not have liked to have been unconscious at that time.

No. 6.

Age of Mother : 26.
Weight of Baby at birth : 7 lb. 7 oz.
Previous babies : None.

1st Baby

1. At first I found relaxation more difficult to practise than I imagined it would be, and I was rather concerned at my inability to do so. After a while I let myself go, thinking that by worrying and thinking too much about it I should never succeed, and I think from then onwards it became easier, until eventually there was no difficulty at all.
2. Yes, as a result of our conversations I had every confidence that labour was not going to be the rather terrible thing I had hitherto imagined.
3. Yes.
4. I do feel that the peacefulness in which my labour was conducted was most helpful, and that such a wonderful time would have been spoilt by any noise or bustle.
5. I do not feel that any part of my experience justified an anæsthetic, but towards the end I certainly hoped that my baby would soon be here. I am very glad that I was conscious of the arrival of my baby, but I am afraid that I can think of no words to explain the marvellous sensation of hearing my baby for the first time and to know that quite soon I should really be able to see her.
6. I can look back now upon the arrival of my baby as a wonderful experience, and as such have no wish to forget it.

2nd Baby

1. As this was my second pregnancy, I did not find the practice of relaxation in any way difficult and am sure it helped tremendously in keeping me fit during pregnancy, apart from the advantages of being able to relax almost to the end of labour.
2. The result of our conversations together with my previous experience made me quite confident that I should have a normal labour, and I can quite honestly say that I had not a single fear.
3. Yes.
4. Yes. I felt the peacefulness in which my labour was conducted was most helpful. The absence of any fuss helped me so much to emphasise the fact that it was a perfectly natural experience.
5. I do not feel that any part of my experience justified an anæsthetic being given.

I am glad I was conscious of the arrival of my baby. To hear her first cry was a marvellous experience which I shall not soon forget.

6. I look back on the arrival of my baby as one of the happiest times of my life, and wish I could remember it more clearly.
7. Although the arrival of my first baby was a very happy experience, I think the second was even happier, as I understood everything better, and the muscular contractions at first seemed so weak. (I don't know if that is the correct description.) I expected to wait hours and hours before my baby arrived, so that her quick arrival was a pleasant surprise.

I am sure that by following your advice and having complete trust in your care of me, I was able to have a healthy and active pregnancy, free from any worries or fears, and such a condition of mind and body must surely have been a great help in the final experience.

No. 7.

Age of Mother : 28.
Weight of Baby at birth : 10 lb. 4 oz.
Previous babies : None.

1. I did not grasp the real meaning of relaxation until the actual day.
2. Yes, it really was a help. I had great confidence.
3. Yes, that was really when I grasped what relaxation meant and I realised that I was helping, not impeding, the baby.
4. Having complete confidence in doctor and nurse, the whole atmosphere was very peaceful and unalarming.
5. I do not feel that I needed any anæsthetic at all. The worst pains were over so quickly, and before them the pains were quite bearable. I am glad that I was conscious of all that was going on.
6. As this was my first child and you yourself told me that the weight was unusual, it might be a help to other mothers to know that I look back on the day as the happiest in my life. I look back on the birth as the most wonderfully happy experience, and I do not wish to forget a moment of it.

No. 8.

Age of Mother : 28.
Weight of Baby at birth : 8 lb. 10 oz.
Previous babies : 1.

1. No, I found the practice of relaxation an inducement to rest.
2. I have no hesitation in answering " yes."
3. Yes.
4. Yes. I was in no way perturbed and had the greatest confidence that everything was going all right.
5. How thankful I am that no anæsthetic was given, and to have experienced this time the joy of hearing my baby cry for the first time.
6. A most pleasing experience.
7. Impossible to compare.

No. 9.

Age of Mother : 32.
Weight of Baby at birth : 10 lb.
Previous babies : 2.

1. I found the practice of relaxation during pregnancy a great relief, and the means of looking forward to my confinement with a contented mind.
2. I found our talks and the teaching generally of vital importance during my pregnancy. I had been fortunate as a normal healthy young

woman in my previous pregnancies, but I had always looked forward to the confinement with a certain amount of dread which I attribute largely to the fact that I had no one to talk to me during that period and so prepare my mind on a normal basis for a normal function.

3. When my labour started and before you came, I tried to relax as you had taught me in our conversations, and found I was able to do so quite appreciably before your arrival. I was, quite naturally, comparing my sensations with my previous labours.
4. The peacefulness in which my labour was conducted was quite a revelation to me, more particularly as after a lapse of eight years since my last labour I had anticipated a good deal of trouble. Your teaching during my pregnancy, which led up to the peaceful labour, was, to my mind, most beneficial.
5. Most emphatically, without any anæsthetic. My first child arrived with the administration of an anæsthetic, and so did my second child. My third child was in my hands before his cord had finished pulsating. I was conscious of my child's cry at the first possible moment. It is a moment in a mother's life which it is impossible to describe. I can only compare it with the sensation I had when I heard my first child cry *half an hour after her birth.* There was, of course, the natural thrill of hearing my first baby's cry, but I was rather overwhelmed by the thought " Stop that kid " as I gradually came to. In this case, my only thought was to see and to hold the child I had given birth to just as soon as I heard his cry. Again, most emphatically, *without anæsthetic.*
6. I look back upon the arrival of my last child as the most exquisite and pleasing experience I have ever had. My hope is that I shall never forget one moment of a perfect labour.
7. With my first labour there was fear and ignorance, both of which need not have been experienced had I been taught during pregnancy and had your help mentally during labour. With my second labour ignorance was obviously less, but fear was still there. My third labour was quite perfect, and an experience to be remembered with joy.

No. 10.

Age of Mother : 30.
Weight of Baby at birth : 8 lb.
Previous babies : 1.

1. I always found the practice of relaxation a pleasant change compared to ordinary resting, and also very interesting. It was not at all irksome, but difficult, particularly at first, as it requires concentration and mental effort. The chief difficulty is to control one's mind, which is very apt to use the time to solve one's daily problems, etc.
2. Yes. I had no idea of these new ideas at first. Having recently had a stillborn child after a very painful labour, I was doubtful of the possibility of producing a live baby, and quite incredulous at having a baby without pain or anæsthetic. The last few months of this pregnancy were the happiest I had had for years, and I felt completely different, mentally and physically. This was to a large extent due to confidence as a result of talks, etc., during pregnancy.
3. Contrary to my expectations after my last experience, I found I was able to relax during the contractions and was even able to sleep and doze during a good part of the time. This made an immense difference to the amount of pain I felt. It required effort and concentration, but was very well worth it.

4. The peacefulness over the whole house was very helpful, and contributed in large measure to the beauty of the whole experience. To be allowed to lie quietly on one's bed with no one bustling about arranging things and continually inquiring as to the pain or otherwise of each contraction, whether this or that was felt, left one free to produce the baby oneself. This has strengthened the bond between my baby and myself. I got the feeling that the Universe was watching and waiting, and the stillness gave me strength.
5. The final stage was so speedy that the question of anæsthetic did not arise. It was entirely unnecessary; in fact, I should have been annoyed had it been given. I should have felt quite differently towards my baby if I had been unconscious when he arrived and should have felt I had let him down badly.
6. The arrival of the baby was an absolutely absorbing experience. I like to go over the different stages of it, and do not feel I cannot bear to think of it, as last time.
7. I had a stillborn baby just over a year before this one. The experience was different from beginning to end. I had a very good nurse and a doctor in whom I had confidence, but they were using other methods. The baby was a fortnight late, and I had two days' and two nights' labour. I had a good deal of chloroform, but was conscious at the time of the birth. The pain for the last one and a half hours was worse than anything I had imagined, and there was a feeling of anxiety and tension over all. I felt it to be degrading that anyone should be reduced to such a state. This time the feeling of anxiety was absent, and a large part of the pain. I was able to lie quietly in a semi-doze most of the time and the household was not disturbed. The last contractions before the baby was born were painful but not unbearable, and lasted only a short time. They were recognisable as merely stretching of the muscles. I felt very well immediately afterwards, and continue to do so.

No. 11.

Age of Mother : 33.
Weight of Baby at birth : 10 lb. 11 oz.
Previous babies : 1.

1. Not irksome, but sometimes towards the end very difficult. When I managed to relax it was very helpful.
2. Yes, but mostly confidence in myself which was sadly lacking.
3. Yes.
4. To a point.
5. Not now, but at the time resented the fact that I was so long in labour with practically no anæsthetic.
6. The most wonderful thing that ever happened to me was when I first saw and heard my baby cry. All thoughts of pain and hours of suffering went. I cannot describe the exquisite joy that surged through my poor tired body at the sight and sound of my lovely son. Nothing can ever equal that moment.
7. I can only look back upon the arrival of my son as a wonderful experience.

I do feel that we were handicapped from the start of my pregnancy. I was very late in coming to see you, and I feel now that had I visited you when I first knew I was pregnant, I could have been saved many months of ill-health both mentally and physically. My ideas were all wrong. Hence,

almost my first words to you after my baby was born were, " Don't let my husband think it was too easy for me " ! !

No. 12. Age of Mother : 30.
1st baby. Weight of Baby at birth : 6 lb. 1 oz.
2nd baby. Weight of Baby at birth : 7 lb. 4 oz.

1st Baby

1. Relaxing during my pregnancy was not difficult for me and during the later months I found it very helpful.
2. Having once realised that a normal labour was not a thing to dread in any way, I felt sure that I could rid myself of the little fears which are apt to accompany a new experience.
3. When my baby first started to come, I did find it somewhat difficult to relax as I had done during my waiting time, but during the later part of my labour it became decidedly easier for me.
4. The peacefulness of my labour was a pleasant surprise to me, and I have no doubt whatever that it was a great help to me both at the time of my baby's birth and afterwards, when my thoughts travelled back to the wonderful experience I had recently been through.
5. I feel there was no necessity at all for me to have an anæsthetic, and I feel now that I should have missed the most wonderful experience of my life had I been unconscious and so missed the first dear little cry of my baby.
6. The birth of my daughter will always remain as a very happy experience and one which is helping me tremendously in looking forward to my second baby's arrival in a few weeks with even more joy than before.

No. 12*a*. *2nd Baby*

My experience of having given birth to my second baby without the help of my doctor was really very little different from that of my first. I certainly missed the comfort of knowing my doctor was there, but I feel proud to think that by relaxing and following the advice given me during the months of waiting, my labour proved quite as easy and peaceful as before. To have had an anæsthetic and consequently missed my baby's actual arrival, with the joy of hearing that first little cry, would have spoiled everything.

No. 13. Age of Mother : 27.
Weight of Baby at birth : 8 lb. 2 oz.
Previous babies : None.

1. No. I found it very restful, and still practise it now if I am tired.
2. Yes. I was much less nervous after our talks.
3. Yes.
4. Yes. I was able to sleep a large part of the time, consequently I was not too tired when the baby arrived to take an interest in her.
5. I thoroughly enjoyed being conscious all the time and knowing what was going on. I feel I would have missed a great experience had I had an anæsthetic.
6. I found the actual birth a very pleasing and exciting experience.

No. 14. Age of Mother : 25.
Weight of Baby at birth : 6 lb. 6 oz.
Previous babies : None.

1. The form of relaxing when tired was most comforting, both in mind and body, and carried me through what I once thought a terrible ordeal,

2. From the moment I met the doctor, and was told and explained, also fully understood, it gave me confidence of normal labour, and I looked forward to baby with better feeling than before.
3. At the time when baby was coming I relaxed, and found muscular contractions very much easier to bear.
4. During the period of labour peacefulness was the thing very much needed as it seemed to fit in with the most important event in my life which was soon to come.
5. The cry of my baby for the first time was by far the most wonderfullest sound I had heard, and at times when I thought perhaps I did need something to help, my mind said, "relax," so I was very glad at being able to be conscious of the arrival of my baby.
6. The nine months of baby's coming was very trying at times, but when all was over and I was holding one of God's creations, I thought it well worth while.

No. 15.

Age of Mother : 33.
Weight of Baby at birth : 6 lb. 10 oz.
Previous babies : None.

Providing that all the conditions of the confinement are normal, I definitely prefer baby to be born naturally. The feeling which comes from knowing the exact moment when baby comes into the world is something which I should not like to have missed.

The first part of the labour was the worst time, as one has a feeling of helplessness and desertion. The last stages have some definite interest, and it seems then that the time passes more quickly and progress is more rapid.

As regards the pain, that is more readily forgotten than the birth of the baby.

No. 16.

Age of Mother : 22.
Weight of Baby at birth : 8 lb. 7½ oz.
Previous babies : None.

1. No, on the contrary I found it most soothing. I started by relaxing for half an hour, but the half hours often lengthened into hours because I was so reluctant to get up.
2. Yes. That, and the experience of my sister-in-law (also your patient for the births of her two children) made me actually look forward to the confinement.
3. Yes, for several hours ; that is, until they became really acute.
4. Yes, very. It is not my predominant memory of it.
5. No. I can speak only of my own case, of course, but I should have lost all self-respect if I had asked for an anæsthetic with so little justification. To have missed the flood of relief and gratitude and joy, the dropping away of tiredness and pain that came the moment the child was born, would have been to have missed something very precious indeed.
6. This question is already fully answered.

No. 17.

Age of Mother : 42.
Weight of Baby at birth : 7 lbs. 7 oz.
Previous babies : 1.

1. Most certainly not ; the practice of relaxing gave me a feeling of peace and strength.
2. Most certainly made all the difference.

3. The minutes between each muscular contraction became a rest as I could relax so thoroughly, confident that nothing would happen if I "loosened up."
4. The lack of haste, and nurses remaining in the labour ward, quietly expectant, was strengthening.
5. The amount taken, if any, was occasioned by memories of my first confinement. None was necessary.
   I was quite conscious of my baby's arrival, which came so smoothly at the last, and her cry almost at once. And my answer to the second half of this question: Would you let a playwright see his efforts tumultuously applauded, and then, as he is called before the curtain to receive his crown—gas him?
6. I enjoy thinking back step by step over the whole business. My first confinement was the devil in comparison, and for many nights afterwards I used to wake up in fear, dreaming it was starting again!

The following few remarks are dealing with my first confinement, and are to be used as a comparison:

Loneliness

I was in labour for eighteen hours during which time many nurses looked at me and said everything was quite normal, and departed.

Left to myself, as the muscular contractions or "pains" got worse, I became more tense and strained, and in my efforts removed all the skin from my elbows, which had to be dressed for a considerable time after baby's arrival.

If someone (question 2) could have talked to me, what a difference—from a nightmare very willingly undergone to something very wonderful and natural!

No. 18.

Age of Mother: 28.
Weight of Baby at birth: 8 lb. 8 oz.
Previous babies: 2.

1. I only started the practice of relaxation ten weeks before my baby was due, but I found it easy and most helpful during labour.
2. I found the teaching helpful during labour, as I was able to understand what was happening and how I was best able to help myself.
3. The relaxing during muscular contractions saved a great deal of the pain, and I found it easy once I had done it.
4. The quietness during labour was helpful, as there was nothing to make one feel nervous, and the peaceful atmosphere helped one to rest between the pains.
5. At no time during labour was an anæsthetic necessary, and I would rather be conscious of the birth of my baby.
6. I have no unpleasant memory of the birth of my baby.
7. I have had two babies previously, and found my last confinement less painful and more pleasant in every way.

Dear Dr. Dick Read,

You asked me for my impressions of everything.

One great thing is the complete enjoyment of actually having the baby. The second stage was so very easy and simple; certainly hard work, but quite pleasant in between times, and I got the feeling that if *I* did not do something about it nobody else would, and if I wanted the baby I had better get on with it. And it was certainly worth working for Timothy.

It made me feel that at last here was something I could do to help, which was really rather thrilling.

The time in the labour ward—two hours or so—sounds to me quite a long time, but it did not feel like it. Perhaps it was because you had dinned it into me to relax (and it certainly seemed the most sensible thing to do) and I was consequently able to be interested in conversation, etc.

I must admit that in spite of having complete confidence in your saying it wouldn't hurt, I was a bit nervous—shall I say ?—of what would happen once things started. Actually, when it came to it, all that fear went, and I just did as I was told.

The end of the first stage is the only bit to which I don't look forward next time, and that wasn't too bad. I didn't quite realise that that pain would go, and I did rather wonder what it would be like to have that pain continually.

The upshot of it is that it was all intensely interesting, very exciting, and I was soon looking forward to the next time. At the moment, however, I am much too taken up with looking after Timothy to have time to think about next time. I feel so pleased with him that I don't mind if he is our only child. That is my present happy state of mind. I shouldn't really like him to be an " only," and except for the added responsibility I'm sure I shall be very willing to start another when the right time comes.

I go about trying to explain to people, when the opportunity arises, what fun it all was, and how wrong the usually accepted idea is. It does seem a crying shame that women should be allowed to *consider*, even, all those wrong ideas.

Yours very sincerely,

Dear Dr. Dick Read,

I should like to illustrate how my mental attitude at the outset of pregnancy was the result of impressions made by outside influences throughout a period of years ; then to show how you brought about a metamorphosis by revealing the whole subject in an entirely new light, and lastly to indicate the extent of my response to your teaching.

I have just had my first baby at the age of twenty years. Probably my early instruction regarding childbirth was common to most members of my generation, who would agree that the whole process of birth, as outlined to them, took form in their consciousness as a thoroughly mysterious and secret business throughout. At five years of age, I remember wondering how the stork bringing my baby sister could have flown in through the nursery window—for that was the explanation of her arrival, and my infant mind did not trouble to question it. Other children were told variations of that theme.

With puberty, the connection of sex with childbirth became apparent, the former to the adolescent mind as something necessary but faintly unpleasant. At this stage I became more inquisitive, and I was fortunate in having my curiosity satisfied from within the home circle. The biology of creation in the latter years of school helped to form a clearer picture of the process. In the holidays, in casual reading, one occasionally encountered mystifying and terrifying descriptions of women in labour which left a lasting impression : *e.g.*, " Honourable Estate," by Vera Brittain ; " Mother India," by Kathleen Mayo ; Ernest Hemingway's " Farewell to Arms."

I married knowing something of its probabilities and possibilities ; childbirth was still surrounded by an aura of mystery—vaguely hinted at as being woman's greatest time of trial and tribulation ; the period of

unmentionable anguish through which she must pass in order to attain her greatest joy. With pregnancy, the over-awed feeling continued—as something to be borne as bravely as possible. Fortunately, I knew roughly what the process would entail, and of the change to take place within my body ; unlike a friend (incidentally the daughter of a well-known gynæcologist) who thought, until the moment of her confinement, that her baby would be born through the " hole " in her tummy ! * I consulted a doctor who did not alleviate my uneasy state of mind and body, and having little confidence in his advice, I followed it only half-heartedly.

Five months later I came under your care—a broad term for the infinite patience and interest you showed in my case-history, subsequent consultations, confinement and postnatal treatment. You change my attitude from being previously rather a selfish one to the realisation that motherhood was a privilege and a sacred trust—woman's justification for her existence. You said that childbirth should be as natural a physiological function as any other performed by the body, and give as much pleasure. I have since realised that much of this teaching was by inference ; I was guided and not commanded ; I felt I had the maximum of peace of mind. I was encouraged to lead a completely normal life as far as possible, paying a certain amount of attention to diet, exercise and relaxation, the whole to ensure the complacent mental attitude conducive to easy, natural birth.

I had your assurance that my labour had begun perfectly naturally, and the last stages were approached in an almost nonchalant manner which was infinitely helpful. There was no studied, operating-theatre atmosphere. I took a conscious interest in the effort to produce my baby, and after her birth the effect of hearing her cry and feeling her lie against me more than compensated for the hard work involved in her expulsion. Finally, to see the tiny, kicking, living thing held up in your hands gave an unbelievable sense of achievement. There was no question of mentally readjusting myself to the state of motherhood as I feel would be the case in an artificial labour.

I am now well aware that I did not respond fully to your methods, for my labour was not the perfect example in practice of your theories ; I realise this because I was not wholly conscientious in bearing out your suggestions. However, if results count for anything, happy memories of the whole event, a beautiful, intelligent baby, and sound physical health, would show that what I was taught has not been in vain.

I see now that there is no reason why pregnancy and childbirth should not be the happiest of times, and should I enjoy that privilege of womanhood again, I am resolved to do even better next time ! I am convinced, as one must be, that this is the only true interpretation of Nature's way.

Yours very sincerely,

DEAR DR. DICK READ,

I am writing to thank you very much for all you did in helping me to have Annabel. I seem to have said so much already in praise of your method that there isn't anything left to write, but I will tell you again, and you must forgive the repetition.

As you know, I was not expecting any pain at all, so when she started I was surprised, and for the first hour I found myself fighting against it. In spite of nurse telling me to remember what you had told me to do, I

* I have had two married women who thought the same thing, until I enlightened them. One was pregnant, and the other came to ask whether she was able to have a baby.—G. D. R.

couldn't think of anything you had said, except to relax, and I had forgotten how to do that, so I lay very taut, groaning and fighting against her. When you came, you told me to take deep breaths, and I think I started co-operating at once, because it became easier to bear. I did not expect her for another fifteen hours, and I thought you would be leaving shortly and just coming back for the birth, and I was not sure whether I would be able to continue doing it alone. I think I would be able to if I have another baby, as I should be better practised at relaxing.

I should have no dread whatever of the same day over again. I did not find the second stage so unpleasant as the first part ; knowing it was getting near the end was a relief, and although the last three contractions were a sharper pain, I could not say I minded them because of the tremendous excitement, quite different from any other experience. Even when you told me I must stop—that was the push before the last—I didn't mind because you said the next time she would be there, and she was. I asked if it was alive and a boy, and you said she was a girl. I felt an unbelievable joy I cannot express in words, any more than I can say what I think of her now. . . .

Yours very sincerely,

DEAR DR. READ,

You asked me to give you an idea of my thoughts and feeling when Sarah was being born.

First and foremost, I feel most grateful to all concerned for leaving me alone ! For me at least the ideal way of having a baby is to go away quite by myself, and not to have anyone fussing round or intruding with talk and questions, etc., and the more I am able to achieve this peacefulness, the more perfect the experience will be.

It is difficult to put a big experience into words but when I am bringing a baby into the world, I get a feeling of being at one with all the living things in the universe, almost as though the spirit behind it were in the room with me. Of course, this side of it is completely lost if the physical side of things gets beyond control, and it is because I have been able to relax during labour that I have been able to keep this control.

Unfortunately, as you know, with my first baby whom I had before I had the benefit of your teaching, stitches were necessary, and this makes the final stage a painful business as the skin tears away again. The last five minutes or so before Sarah arrived I'm afraid I lost my grip, as she came with such a rush, and I lost control of the situation. With John this was not so ; though I could feel the old scar tissue giving way, it was not so painful, and I don't think I lost my nerve so much. This was, I believe, because you and Sister Walker were both there giving me confidence. At this stage I think one does want someone to reassure one and rely on.

I think the simile of allowing oneself to be carried to and fro like a fish by the tide best expresses the help that relaxation gives.

I consider that having babies is hard work mentally and physically, but no other experience in my life will ever give me such a fierce satisfaction. As I told you, I believe, some months before Sarah was born I wanted to have her on my own, and I am glad I did.

When I think how entirely horrible my experience with my first baby was, I cannot be too grateful for your help.

Sarah continues to be a most contented infant, and gains by leaps and bounds, and I feel that I could ask for nothing better than to go on producing babies and nursing them for the rest of my life !

Yours sincerely,

DEAR DR. DICK READ,

. . . I was given an anæsthetic contrary to my wishes ; I was conscious when my baby arrived and I heard his cry ; in this moment I attained heights of happiness which I had not thought possible.

Usually in moments of extreme joy or sadness I have cried a little, but this was too wonderful even for tears. The remembrance of his arrival is a constant joy, and to have been unconscious at that moment would have destroyed the joy of possessing him, and I feel that if I am given other babies I should not want to miss by anæsthetic the moment of their birth.

The most amazing thing about the labour is the way the smallest detail, like the position of a glass or the dropping of a towel, is registered by the mind, so that now, when I think of it, I can remember every little detail of the whole night until baby was born. After that I can only remember the more important things.

Now that baby is growing, and I have settled down to a routine, I find that I am much more tolerant towards other people, and small things which irked me before do not do so now, and it is much easier to see other people's good points instead of their faults. In short, having a baby has made me a much nicer and much more " human " human being, and I am looking forward to having more babies in the future.

Yours sincerely,

DEAR DR. READ,

It is difficult to write a letter of thanks which really conveys appreciation, but I hope this may convince you that I am most exceedingly grateful for having come into contact with your methods.

I, too, was sceptical at first, and did not believe that the building up of a patient's courage and confidence in herself is more powerful and safer than anæsthetics.

Personally, I had very little pain in comparison with what I expected to experience, and still less would I have felt had I been a better subject for you which—owing to my inability to accept without questioning—I was not. . . .

Yours sincerely,

DEAR DR. DICK READ,

. . . Sister thinks you would like to know my feelings during the stages.

The pain was at all times quite bearable, although in the second stage things moved so quickly that I was given no time for rest, and did feel that I could not stand it for an hour or more, but was then told that it would be over in a few minutes ! The feeling of relief after the baby's birth was too good to miss, and I am very glad I did not have an anæsthetic.

The coming of the after-birth was quite a soothing sensation.

My feelings about the whole procedure are that on no account would I have missed any of it, and the joy of having Alan with me at such a time has made a memorable and most happy occasion. I am looking forward to next time already.

I think you would like to know how happy I felt in sister's hands, and that as you could not be with us I much preferred to be entirely in her charge until the event was over.

Yours very sincerely,

My son was born on 23rd September, 1939, and I shall always look back on his birth as one of the great experiences of my life.

There was a thrill akin to the commencement of a voyage of discovery

when I felt the first faint but definite contractions, and realised that my long-awaited baby had begun to make his way into the world. Coming at first half-houring, these " flutterings " became more insistent in about two hours until I felt them every five minutes, and I knew I should soon need the doctor's help. Once my thoughts were concentrated in other channels, *i.e.*, telephoning and the business of getting to the Nursing Home, the pains came less frequently and I remember feeling great confidence in myself.

Soon after I was installed in the Home, two very sharp thrusts of pain caught me ; again I noticed relief when I was on my feet, and reluctantly I lay down. Then followed a series of terrific thrusts when I completely lost my head and let agony take possession of me. How I wished I had given the doctor longer notice ! However, after about half a dozen of these spasms the sensation changed, and I had a tremendous urge to bear down, though the nurse told me not to, and for a few minutes she and I seemed to be at cross purposes, but soon I heard the calm voice of the doctor reassuring me, and then they let me bear down. With wonderful relief I thrust with all my might, enjoying a comforting sense of team work as the doctor, the nurse and I worked together. There was exhilaration I shall never forget as with each push I helped my baby along. Then, suddenly, I heard his cry—surely the most surprising and wonderful sound on earth !

It seems that at such a time the mind is doubly receptive, and through the experience of this confinement I feel myself a stronger and more confident woman.

Three impressions are indelibly printed on my mind : the greatest is the sense of ability and joy as I brought forth the new life ; secondly the strengthening and purifying effect of the period of intense pain which preceded it which, to me, lends great significance to the birth ; and thirdly, the complete relaxation and sense of achievement which followed. Perhaps I felt this last more keenly in comparison with my first confinement, when my nervous reaction was very bad.

I have had two confinements—the first with the administration of an anæsthetic and the second without. Comparing the two, I am of opinion that the first was an entirely slothful and cowardly way in which to accomplish the miracle of childbirth. With the second, the knowledge that I definitely took part in the birth and consciously assisted my baby right from the very first movements of his life established a relationship between us which in the case of the first had to dawn and was cultivated with breast feeding. Had I been unable to feed the baby myself, I dread to think what I should have missed.

Thus, in addition to providing me with an unforgettable experience, the natural birth laid a foundation for a happy partnership from the first. Moreover, in a normal case such as mine, the use of an anæsthetic was absolutely unnecessary and would merely have deprived me of the really thrilling episode, because I should have experienced the severest pain before it was administered. Finally, I am convinced that the anæsthetic in the first labour had disastrous effects upon my emotional reactions, making the establishment of natural feeding difficult. Is it possible it made my baby lethargic ?

In making these observations, I realise that with the second I might be termed an " experienced " mother, but I am certain that after an anæsthetic I could never have attained the blissful peace of mind which followed the birth of the latter child.

Therefore, given normal circumstances, for any future confinement I would not hesitate to dispense with the artificial aid of an anæsthetic.

DEAR DR. DICK READ,

As you know, Mrs. —— had a lovely baby girl (7 lb. 1 oz.) three and a half weeks ago.

I arrived only three days before the baby was born, and found her rather keyed up. However, on the day of the birth she was about early in the morning, feeling rather restless. She ate an enormous lunch, which she enjoyed ; then at about 2 p.m. she said she thought she was beginning. Her contractions—which, after coming every twenty minutes, became more frequent—were very strong indeed. She was able to relax through each one as it came along, very much to the surprise of the family, and most of all Dr. ——, who, when I saw him and told him she had been in your care, said, " Oh, yes ; a form of mesmerism." So I remained silent, and waited. He does not think so now, and to-day, after seeing her on her return from a long walk, said he would like to read about it.

To return to the birth. She relaxed through each contraction, even at full dilatation ; then the membranes ruptured, and after the second stage had begun she had a sleep of about one and a half hours, only rousing slightly at each contraction ; then at the end of this time the babe was on the perineum. She woke up, and we all worked to push out the babe, which arrived, very nicely and without a tear and without the patient even thinking of chloroform, at 8.7 p.m. The babe's first cry was a great joy to her. It had one of the shortest and thickest cords I had ever seen. The third stage was soon over, and when her brother was allowed to see her a short time after, she was sitting up powdering her nose, etc.

Having a baby in this way has caused quite a sensation among the mothers of her circle, who had never thought it possible that any woman could have a baby so easily, especially at Mrs. ——'s age, and with her history. Her sister-in-law, who has two children, has decided her next shall be born under these conditions, and two other friends who are pregnant with their first babies have been in to hear how it is possible.

I am glad to have been able to help her a little in achieving her desire. The babe grows apace, has a vital physical body, and her mother has an excellent supply of milk, another source of wonder to many. I can't think why . . .

With all good wishes,

Yours sincerely,

DEAR DR. DICK READ,

I have read through the list of your questions, and the following are my thoughts and views on them :

1. I found the practice of relaxation difficult to acquire thoroughly. It was not particularly irksome, and with longer time I should probably have achieved a more complete mastery of every limb and muscle.
2. Starting, as I did, as a sceptic, if not a disbeliever, I can now say that my distrust of medical practice at childbirth was entirely replaced in the end by confidence and some realisation of the facts of normal labour. But I must confess that my previous confinement had left lurking doubts which only the safe delivery of my second child could remove. The conversations stimulated me during some anxious and doubtful days of waiting. I came away from them with higher ideals and a better sense of values which will certainly continue to help me in my everyday life.
3. I was able to relax to some extent during the muscular contractions, and the effort to relax assisted me to keep my mind above pain to some extent.

4. The atmosphere at my labour was most helpful. The peacefulness and absence of fuss or whispered asides made me feel at ease and a partner in the conversations and goings-on, instead of the miserable, ignored sick patient I imagined I would be.
5. Definitely not, though at the time I wanted it occasionally. This desire, I know, was due to the occasional appearance of fear caused by vivid thoughts of my first confinement and realising that I could not go on without it if I had to experience the same again.

No, the moment of hearing the baby's first cry was one of poignant emotions difficult to describe. Doubtful surprise, expectancy, curiosity, joy ; an unforgettable experience.

Not terrifying, and not one which I wish to forget. While it leaves no unpleasant aftermath, yet I would hardly call it pleasing.

7. I think you are aware of the facts of my first confinement, which by comparison with my present one was a ghastly nightmare. The atmosphere at the confinement was as at a major operation ; pleasure or happiness did not exist. Instead of confidence and calm there was fear and anxiety to hear the baby's first cry—which being finally anæsthetised, I missed.

I can pay no higher tribute to the careful, calm and understanding treatment given me at this confinement than to say that given the same conditions again, I would not mind or dread having another baby to-morrow.

Yours sincerely,

DEAR DOCTOR,

I thought you would be interested to hear my reactions regarding the births of my babies.

Having been unfortunate in a difficult labour with the first, I was naturally looking forward with mixed feelings to the birth of my second baby.

Although you did much to reassure me during my waiting time, I was by no means anticipating such a marvellous revelation.

Your theory that childbirth was a perfectly simple and comparatively easy function I frankly found difficult to believe. The following events prove that you were right and I was wrong :

On 18th November I awoke at 3.30 a.m. feeling *slightly* uncomfortable. I woke my husband and got up to make a cup of tea. I became apprehensive, as the pains were now pronounced but not in any way unbearable. A little while afterwards, with almost no warning whatever, my baby arrived, before 4.30 a.m.

Everything was so easy and natural that I should not have the slightest apprehension in having another baby. I felt perfectly well after the birth, and experienced no discomfort in any way.

It was indeed an amazing and happy experience.

Yours sincerely,

1 Did you find the practice of relaxation or the doing of exercises worth while, both in consideration of your present state of health and the actual labour ?

Exercises and relaxation I found of the greatest assistance both before and during labour. They also helped me afterwards, as I had no difficulty in doing postnatal exercises, and felt no strain or stiffness on getting up.

2. Can you give me your views on :
   (1) Drugs to dull all sensibility to what occurred during labour.
   (2) Anæsthetic during the last stage.

   I am sure that, when possible, it is better to be without drugs during labour, both from a mental and physical point of view. The only time that they might have been a help was during the last dilatation pains, but not during the bearing-down pains or at the actual birth.
3. Can you compare your two labours, if possible suggesting the main reasons why the second was so different from the first ?

   My second labour was in every way more satisfactory than my first, chiefly because I knew what to expect and also because I felt confident that I had control of the muscles I had to use when bearing down. I also found that I could relax while actually having the first dilatation pains, and rest well between them. During the last dilatation pains I found the " all-fours " the most comfortable position, as this relieved any external pressure. I think it is a great help to the prospective mother if the doctor explains beforehand exactly what she will have to do, and what will happen, and at the actual labour tells her how things are progressing.

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